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JUNIOR COLLEGE JOURNAL

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NUMBER 6

Intelligence—Our Active Gift*

LEN BLACKWELL

MR. ADMINISTRATOR, you are a member of that group of people who realize how complex the problems of our civilization are. While you do not have the immediate solution to all of these problems, you are able to present to the world a very special commodity: capable people who will shape the destiny of this universe. Young people see you as their president or dean; you advise them, teach them, and provide for them so that ultimately the gifted may fulfill that function which the world in every age demands: creativeness.

How will your top students stand up to those of other colleges, especially those of other nations? What incentive do you offer your students to improve their studies? Can you provide honor for curricular activities, the supposed basis for higher learning?

Many of you are projecting your programs into the area of honor student activities, but it might be well at the outset to identify this student. The superior student or prospect for any honor society is perceptive and mature in his thinking; he works independently and has the ability to express himself. These qualities are obviously more than intellectual performance,

for they involve curiosity, originality and research ability—qualities which are difficult to catalog. And so, Mr. Administrator, you have a difficult task. Your life is given to producing something that no one in the world can label or sell or even specifically define. Are you merely identifying this student or are you helping him achieve greater heights through the totality of his college experience?

I cannot suggest to you an educational panacea, but instead, I can propose a means to stimulate the mental life of superior and industrious students, an important aid at a time when recognition is of utmost importance. I offer assistance which is invaluable—the honor society of the junior college, Phi Theta Kappa.

Phi Theta Kappa is not comprised of a random collection of supposed intellectuals but is the recognized honor society of the junior college. It was approved in 1929 when the American Association of Junior Colleges designated it as the official honor society for the junior college.

You may ask how you, as an administrator, can profit from Phi Theta Kappa. How can you use a campus club to help your work? Phi Theta Kappa builds leaders. Students who desire learning and who set for themselves high educational goals, who seek more than pedantic bookishness are all a part of this unity of superior students.

* *Editor's Note:* This article is an address which was given by Mr. Len Blackwell, a student at Perkinston (Mississippi) Junior College, and National President of Phi Theta Kappa, to the administrators of Mississippi Junior Colleges during their fall meeting, 1960.

Phi Theta Kappa is a morale builder that students need at a very impressionable time in their lives. As a student and member of Phi Theta Kappa, I can say, along with thousands of others, that membership in this organization assists materially in giving proper perspective to the importance of scholarship.

You, as the administrators of our junior colleges, have an important role in building scholars through Phi Theta Kappa. It is up to you to select an appropriate sponsor for your local chapter, which is a major step in establishing an active chapter. The sponsor you choose must be a lively, interested, tireless and superior faculty member who is willing to promote academic achievement, good citizenship and moral character among the members. You are also in a position to influence all faculty members to seek a better relationship with the organization. This should not be difficult for you, and the practical aid that the other teachers can offer is invaluable to the chapter. In addition, you can assist in solving the problems of time and space for meetings. You should visit your chapter occasionally; the members will be honored and happy to have you. You are the link to the business office, so the chapter expects your help. Remember that some schools supplement salaries for sponsors and lighten schedules.

You can see your chapter at its best when you watch the members participate in national events. You should encourage active attendance at national conventions and perhaps even accompany your students and see for yourself their seriousness of purpose.

Recognition in the form of awards is necessary if your chapter is to become active. By entering national competition,

your chapter will vie for national trophies. You should encourage your chapter to get into this competition; through active participation in Phi Theta Kappa your junior college can attain even greater national recognition.

If you do not have a Phi Theta Kappa chapter in your college but would like to become affiliated with this organization, your institution must be a member of the American Association of Junior Colleges. Application should be made to the Executive Secretary-Treasurer of Phi Theta Kappa, Margaret Mosal, Canton, Mississippi.

Phi Theta Kappa functions because of people who want to be a part of intellectual fellowship, and you are invited to experience this unique spirit at your college. Since you are the leaders of one out of every four students in America and since there are many of these students who are eligible for Phi Theta Kappa, you surely will want to join the over 200 junior colleges that have active chapters.

On Thursday morning of the AAJC convention at 7:30, you are invited to attend a Phi Theta Kappa breakfast. You can use the tickets that your chapter has presented to you. This meeting will involve some of your number in a most delightful way. We shall count on having you as guests. Do not fail to call on us for any information which you may need.

Phi Theta Kappa is an organization with high and noble standards composed of superior students. It builds leaders of intellectual strength and moral stability. Join with us in our prayer for wisdom reflected in gifted lives. Become actively affiliated with the organization of concerned youth—Phi Theta Kappa.

Toward More Effective Junior College Districts

GLENN D. WILLIAMS

IN THE past there have been many fragmentary and some complete attempts at establishing criteria to be followed in creating junior college districts. To offer hard and fast principles with no eye to conditions which exist in the several states, to say nothing of particular problems in given areas of those states, appears to be unreasonable. However, some re-examination of the general guidelines to be considered in establishing junior college districts does seem to be in order from time to time. Current interest in a review of these general principles has been stimulated by changing economic conditions, population shifts, and a heightened concern for post-secondary instruction of a two-year nature.

In this spirit of periodic reexamination the author recently contacted both junior college presidents and general authorities in the field to determine reasonable general criteria for the establishment of junior college districts. These contacts were achieved by mailing a 42-item questionnaire designed primarily to exact views on optimal districting criteria from the respondents. The questions were formulated after a careful examination of both professional literature and the districting

requirements of those states now having junior college legislation.

One hundred and forty-nine questionnaires were sent to public junior college administrators and general authorities throughout the United States. Bases for the selection of administrators included the enrollment of the institution which they head, extent of the program, and geographic location. The authorities were selected in light of their experience in, and contribution to, the junior college field. The general authorities included members of state departments of education, college instructional staffs, and specialists in the U.S. Office of Education.

One hundred and nineteen questionnaires were returned with many being supplemented by a letter of explanation and amplification. Ninety-nine presidents returned the form with 47 supplementary letters accompanying the checked responses. General authorities in the field returned 20 questionnaires and sent 12 letters. One hundred and twenty-two forms went to presidents currently engaged in junior college administration and 27 to individuals considered general authorities in the junior college field. To the vast majority of the questions, the responses of the two groups were very nearly identical.

The criteria for establishing junior college districts were determined in light of both the checked responses and the ampli-

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fying comments. Because of the response distribution to some questions, a combination of answers was indicated. In this case the author blended the results into a meaningful whole. Thus the criteria were selected not only on the basis of majority vote but also in view of trends in both the checked responses and the written comments.

In addition to citing the criteria for districting, certain other principles are offered in the list that follows which are attendant to, but not intricately involved in, districting. These additional facets are presented under several headings for the purpose of understandability.

The results of the survey show the following criteria for junior college districting to be current in the thinking of administrators and general authorities in the field:

1. The minimum population of a junior college district should be 40,000.
2. The minimum number of post-secondary 18- to 21-year-old potential students in the district should be 1,000.
3. The minimum assessed property valuation in the junior college district should be 40 million dollars, with an average tax of .25 mills.
4. The minimum total school population in the ninth through twelfth grades of the proposed junior college district should be 2,000.
5. The junior college district boundaries should be based upon the county unit where possible.
6. Each junior college should be state aided but controlled and operated within the established district.
7. A petition of at least five per cent of the eligible voters of the junior college district should be required to be presented to the state governing authority in order to initiate action for junior college establishment.
8. The authority to petition the state govern-

ing agency for the establishment of a junior college district should lie with any interested citizen's group.

Organization and Administration

1. The junior college should be under the administration of a local board.
2. The local junior college board should be elected at large from the district.
3. The state controlling and accrediting agency should be the state department of education.

Level of Program and Curriculums

1. The junior college should offer curriculums which include college transfer, semi-professional and technical offerings, vocational courses, general adult offerings, and remedial courses.
2. The curriculums of junior colleges should be determined by a combination of requirements for college-parallel courses, a statewide survey of specific needs, and a survey of local needs.

Method of Financing Operating Costs

1. Operating costs should be met by a combination of state and local taxes and student tuition.
2. State funds for operating costs should be provided through a foundation program.
3. Operating costs should be proportioned 1/3 state, 1/3 local, 1/3 tuition.

Financing Capital Outlay

1. Capital outlay for a post-secondary institution should be provided by 50 per cent state aid and 50 per cent local post-secondary institution taxes.
2. The power to submit taxes for capital costs to a vote of the people of the junior college district should lie with the governing board of the junior college.

Admission Policy

1. Junior college students living in a given district of the state should be permitted to attend a junior college in another district of the state if their home district does not offer adequate courses and request their home district to pay the tuition.

General

1. A reasonable distance to expect students to commute to a junior college for regular classes is 30 miles or one hour's traveling time each way.
2. The percentage of the total enrollment of a junior college which is composed of adults might logically be expected to reach 50 per cent or more.

It should once again be pointed out that application of the above criteria without regard for local or regional physical and financial limitations will probably result in an unfortunate districting experience. The effort here is to provide some guidelines to be used when considering the dimensions of a junior college district.

Some of the aforementioned criteria have been in print many times before. However, there are several new items which are worthy of attention:

- (A) The millage, coupled with assessed valuation, should receive some attention. This is offered as a reasonable millage rather than a minimal or maximal millage. It should also be considered in light of appraisal policies, which are difficult to ascertain in a questionnaire. Failure to include millage in the questionnaire, however, would have meant listing a valuation figure which is tied to no income. Thus, the valuation figure would become meaningless.
- (B) Although not a new idea, the insistence upon the junior colleges' including a strong program of remedial offerings tends to lend weight to the position that there is increased interest in this phase of the curriculum. Many of those responding referred to it as a "salvage function," emphasizing that such a function is logical and necessary for a two-year institution.
- (C) Responses from California administrators were strongly in favor of a tuition-

free institution. However, the great majority of those returning the questionnaire took the position that one-third of the operating cost should be borne by the student. Some respondents indicated that as high as 50 per cent of the money for operation should come from student tuition.

- (D) There were numerous comments regarding the evils of emergency grants. Strong support was given by the respondents to a foundation program which takes into account the particular needs of the junior college. Among the difficulties cited regarding a program of grants were its temporary nature and the sense of financial insecurity which it provides, coupled with the possibility of a periodically fluctuating fund for operation.
- (E) In the past, authorities have alluded to 30 miles as a reasonable commuting distance for junior college students. The current study found a number of respondents indicating that one hour's traveling time each way is a more realistic measure of proximity than distance in miles. With freeways in some areas and growing congestion in others the problem of commuting is better measured in time rather than miles.

In summary, it appears that the spirit of the districting provisions is to enable the establishment of junior colleges which are large enough to maintain a comprehensive program but which operate not only close to, but with, the people of an area. Reaching this goal in light of carefully established and constantly reevaluated districting criteria can avoid a grab bag approach in providing worthy junior college opportunities for the nation's citizenry.

Financing the Public Community College: A Summary of Local Taxes, State Aid and Student Tuition as Sources of Revenue

CHARLES W. THOMAS

It is becoming increasingly evident that in a competitive world this country has great need for high quality leadership and professional talent. Potential leadership and talent can no longer be allowed to remain undeveloped. This country must evolve an educational system that will allow qualified individuals to develop to the fullest their aptitudes and interests regardless of their racial, social, economic and religious background. To help meet this need, an increasing number of two-year community colleges are making an appearance. However, the major question associated with the formation of such colleges is that of money—where can financial means be obtained to establish and support these colleges?

LOCAL TAXES AS A SOURCE OF REVENUE

Public education is usually provided by separate school districts existing apart from their municipal and county governments. These districts vary in size, character, programs and fiscal resources. Under existing circumstances, a district may be

too small or have too little wealth to finance adequate educational programs at the elementary and secondary levels without attempting to assume the additional financial burden of supporting a community college.

In many cases, until state aid is made available, local districts tend to ignore the post-high school educational needs of the community, or hope this responsibility will be assumed by some private agency. But as Hillway¹ points out, even when state aid is made available, the community, through local taxation, must pay its fair share of the cost of a community college. He suggests that as a minimum the local community should accept the responsibility for providing building and equipment facilities necessary for a satisfactory program. However, whatever method is used to promote the establishment of a community college, the individual district will have to determine its responsibilities and establish the place of the community college in the over-all public education program of the community.

All local districts have the property tax as their major source of revenue—a source

Former Registrar and Dean of Students at Anchorage Community College, Anchorage, Alaska, CHARLES W. THOMAS is Assistant to the Dean, Thiel College, Greenville, Pennsylvania.

¹ Tryus Hillway, *The American Two-Year College* (New York: Harper & Bros., 1958).

that is shared with other governmental units. Both Burke² and Udall³ state that the property taxing potential of local governmental units is seriously restricted in almost every state by poor assessment evaluations. State constitutional provisions and laws established many years ago make it difficult for the property tax to meet rapidly changing conditions. Many districts, as Udall⁴ points out, have reached the debt and taxation limits imposed by state laws. Also, during the past year, many districts have experienced difficulties in obtaining voter approval of budgetary proposals and bond issues.

Most of these monetary problems can be traced to the close ties with the property tax. It is clear that school districts and other governmental units should investigate methods of improving the equality of this tax and of making it a more realistic and efficient source of revenue. Perhaps when this is done more communities will be better able to support a two-year community college.

STATE AID AS A SOURCE OF REVENUE

Hillway⁵ concludes that in the states that provide adequate financial assistance to the community college through a state-wide plan of regular support, the two-year college program develops fairly rapidly, while in those states where the burden of support is left to the local districts, the development of the community college

program is much slower. He feels that no really satisfactory system of community colleges can be developed without state aid. Martorana,⁶ in studying the New Mexico problem, recommended a plan for financing the operation of the new community colleges on the basis of a minimum foundation figure per student per year as the base amount to be used as a formula for state and local financing which would take into account the principle of equalization.

It seems that some system which involves a greater responsibility on the part of the state for control and financing would most likely bring about greater equality in establishing educational opportunities beyond the high school level. However, in a study of financing the public community colleges reported by Medsker⁷ only three of the 17 states included in the study had developed any plans concerned with the equalization factor. In this study it appeared that several of the states have more or less rigid amounts quoted in their basis for aid which might not allow the flexibility necessary in inflationary times or when greater capital needs arise. Also, the limitations imposed by some states are such that only the portion of the over-all college program that is offering courses for college academic credit are subject to state aid. The other phases of the over-all program are not provided for by state aid

² Arvid J. Burke, "The Ubiquitous Problem of Money," *School Executive*, Vol. 75, No. 5, January, 1956, pp. 57-59.

³ Stewart L. Udall "Our Education Budget Also Needs Balancing," *The Reporter*, Vol. 20, No. 13, June 25, 1959, pp. 27-28.

⁴ *Ibid.*

⁵ Hillway, *op. cit.*

⁶ S. V. Martorana, "Survey of New Mexico's Needs for Community Junior Colleges," *Higher Education*, Vol. 13, No. 5, January, 1957, p. 90.

⁷ Leland L. Medsker, "Financing Public Junior College Operation," *N.S.S.E. Yearbook*, Vol. 55, Part I, *The Public Junior College*, National Society for the Study of Education, Washington, D.C., 1956, pp. 247-266.

but must depend upon local support either from taxation or from tuition or some combination of these.

From the literature, it seems evident that agreement is lacking among the states as to a workable formula for financing the community colleges. The present trend seems to be for the state to supply an increasing percentage of the revenue for the operational expenses of these colleges. But with the increasing complexity of supplying governmental services at the local level caused by the expanding metropolitan areas, it is quite likely that other governmental services will be looking to the state for co-ordination control and as the primary source of fiscal assistance. If this occurs, it is entirely likely that the community college will be required to seek an increasingly higher percentage of income from other sources if it is to develop the scope desired in its program.

TUITION AS A SOURCE OF REVENUE

Hollis⁸, in discussing the question of student tuition for higher education, brings out that the underlying philosophy for tuition-free higher education is that it, like secondary education, is maintained primarily for the welfare of society. The nation benefits from educating those people who are capable of utilizing such an education. As public education became the accepted practice in this country, some states developed institutions of higher learning that are regarded as part of the public education system and that are supported mostly by taxation. In some cases,

the charging of tuition was prohibited by the state constitution.⁹

According to Hillway,¹⁰ tuition and student fees are factors which limit enrollment. Even when scholarship aid is available, the college that charges \$200-\$500 per semester cannot hope to enroll all deserving students who could benefit from higher education. Many educators and other leaders regard the trend of increasing tuition in public institutions as a step in the wrong direction. Only when the services of a community college are offered free, or at a price well within the reach of every student, will the financial barrier to educational opportunities be broken.¹¹

The trend to raise the tuition in state-supported institutions is justified by the governing boards by two major points, according to Hollis:¹² the legislatures do not make appropriations large enough to carry out the programs that the boards and administrators have projected, and governing boards accept the fact that students profit financially from their education. Glick and Miller¹³ support this view as in their study they estimate that a man with a college education will receive, on the average, at least \$100,000 more income in his working lifetime than a man whose education stops after high school graduation. Meck¹⁴ argues that

⁸ *Ibid.*

¹⁰ Hillway, *op. cit.*

¹¹ *Ibid.*

¹² Hollis, *op. cit.*

¹³ Paul G. Glick and Herman P. Miller, "Educational Level and Potential Income," *American Sociological Review*, Vol. 21, No. 3, June, 1956.

¹⁴ John F. Meck, "How Much—and How—Should Students Pay for Higher Education?," *Annals of the American Academy of Political*

⁸ Ernest V. Hollis, et. al., *Costs of Attending College* (Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, Bulletin No. 9, U.S. Government Printing Office, 1957).

since both the individual and society in general benefit from the education that the student receives, both should contribute to the cost of that education. The student should do so through payment of tuition and fees and through subsequent gifts, and society should do so through public appropriations and private contributions in order to keep the increasing costs of education within the reach of as many as possible who have the interests and aptitudes to benefit from higher education. The proponents of this thinking believe that student charges are a logical and indispensable source of revenue for higher education.

Harris¹⁵ feels that in view of the fact that state and local governments have increased their debt and expenditures by 200 per cent in the last ten years and in view of their vulnerable financial position, it is not likely that taxpayers will tolerate a financial policy for public education institutions which excludes substantial rises in student tuition. Further, it is unlikely that in view of all the demands made on state governments the taxpayer would endure a large expenditure increase for public institutions of higher learning. This is particularly true since states are under great pressure to increase their contributions to elementary and secondary education.

Harris¹⁶ suggests that the student be asked to pay a much larger percentage

and Social Science, Vol. 301, *Higher Education Under Stress*, American Academy of Political and Social Science, Philadelphia, September, 1955, p. 169.

¹⁵ Seymour E. Harris, "Charging the Student Tuition on the Basis of Cost," *Educational Record*, Vol. 40, No. 1, January, 1959, pp. 24-28.

¹⁶ *Ibid.*

of the total cost and at least a much larger percentage of the operating costs than at present. The plan Harris advocates calls for a multi-billion dollar student debt expansion. High tuition and student debt expansion would provide the principal source of additional investment funds for higher education. Students could borrow funds necessary for financing a college education at low rates of interest and could make arrangements to repay this sum following graduation. (These loans would be underwritten by the federal government if necessary). Thus, the student who benefited personally from obtaining a college education would pay a larger portion of the costs than would the taxpayer who did not attend college. It is important to note that Harris states that by the use of such a plan the local and state governments' share of the financial burden for higher education would be reduced a significant percentage during the next ten years.

Martorana's^{17,18} studies indicate that the two-year community colleges having local tax supporting districts tend to keep the student costs at a minimum. For these types of institutions, most of the income is obtained from local taxes (over 50 per cent) and from state aid (slightly over 25 per cent) and only about 10 per cent of the cost of operation comes from student sources. Amounts of revenue obtained from such sources as endowments, organ-

¹⁷ S. V. Martorana, "Patterns of Organization and Financial Support in Public Two-Year Colleges," *Higher Education*, Vol. 14, No. 9, May, 1958, pp. 151-157.

¹⁸ S. V. Martorana and D. G. Morrison, "Financing Public Two-Year Colleges According to Patterns of Organization and Region," *Higher Education*, Vol. 15, No. 4, December, 1958, p. 62.

ized college activities, property sales, federal government funds, etc. are insignificant. In contrast, the state two-year colleges receive their financial aid from state sources (about 50 per cent) from auxiliary enterprises (such as residence halls, dining halls, cafeteria, faculty housing, etc.,) and from student tuition. Martorana¹⁹ reports that when considering all the two-year colleges, local taxes provide 27 per cent, state aid 34 per cent, and tuition 12 per cent of the total revenue.

Another interesting point that can be rated in these studies by Martorana *et al.* is that there is little uniformity in the distribution of income for operating two-year colleges over the nation. In fact, there is evidence of a great variation in sources from different parts of the country and even within each region. Further, it is evident that traditional and historical practices influence the financing of colleges in each area.

¹⁹ S. V. Martorana and D. G. Morrison, "Financing Public Two-Year Colleges Affiliated with Four-Year Colleges, Universities and University Systems," *Higher Education*, Vol. 15, No. 7, March, 1959, pp. 122-126.

SUMMARY

It appears that the place of the community college in the American system of education has not yet been clarified. The community college may be found in a variety of organizational districts with many systems of control and fiscal support. The community college depends upon state and local taxes for the bulk of its revenue, with the state providing an increasing percentage of the total. However, as increasing pressures are placed upon state and local fiscal resources due to the seemingly ever-increasing number of governmental services being demanded by the public, it is doubtful that the community college can, in the future, continue to look to the state and local district for such a large percentage of the total revenue to meet operational costs. It seems likely that this type of institution may well be required to seek sources of revenue elsewhere. The most promising sources may be: (1) increase in the tuition, (2) federal aid, (3) greater support from business and industry, and (4) more efficient college management.

Recognition for Engineering Technicians

WILLIAM G. TORPEY

THE YEAR 1961 has begun with increasing concern for this nation's growing needs for specialized manpower. One member of this basic type of personnel is the engineering technician, the individual who performs specific tasks which are functional parts of scientific or engineering activities requiring knowledge of fundamental theory. The efforts of the engineering technician are based on a knowledge of underlying scientific, engineering or mathematical principles related to a specialized field of work, coupled with his ability to apply established scientific techniques and methods toward the solution of practical problems encountered in the field of specialization. The purposes of this article are: (a) to set forth the outline of a utilization conference program which has focused attention on engineering technicians (along with other phases of conservation of professional manpower); and (b) to review the concept of a recognition plan for engineering technicians which is already in operation in Canada and which is scheduled for implementation in the United States early in 1961. Junior colleges, four-year colleges offering engineering technician programs,

technical institutes and community colleges may be particularly concerned not only from the viewpoint of future participation in the utilization conference program but also as developers—along with four-year colleges, technical institutes and other educational organizations—of engineering technicians.

EMPHASIS ON ENGINEERING TECHNICIANS

In 1956 President Eisenhower established the President's Committee on Scientists and Engineers to coordinate and stimulate the nation's efforts to meet growing needs for scientific and engineering manpower. The membership of this temporary committee was drawn from major citizens' organizations concerned with the education, training and utilization of scientific and engineering personnel. One important phase of the total program of the President's Committee on Scientists and Engineers was a utilization conference program. Specifically, the Committee adopted a plan calling for a series of local utilization conferences to be held throughout the United States.

The purpose of such conferences has been twofold: (1) to permit an interchange of ideas on specific policies and methods which promote optimum utilization of scientific and engineering personnel among individuals representing government agencies, industry, and educational institutions and (2) to stimulate

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self-analysis and subsequent "follow-through" action by conferees having manpower responsibilities. A total of 19 conferences were held under the Committee's auspices during the period September, 1957-December, 1958.

Incident to the termination of the President's Committee on December 31, 1958, the utilization program of the Committee was transferred to the Executive Office of the President, Office of Civil and Defense Mobilization, where the Manpower Area is carrying forward the program. To carry out the responsibility of the Manpower Area requires a manpower organization in place and ready, an adequate knowledge of the present and potential manpower supply and requirements, and action to eliminate or reduce present and foreseeable shortages of manpower. The utilization program typifies action through responsible local groups and organizations to eliminate or reduce actual or potential shortages in scientific and engineering manpower fields.

During each of the 40 utilization conferences already held under the auspices of the President's Committee or OCDM, the role of engineering technicians as aids to scientists and engineers has been featured. Two frequently discussed aspects of the problem of making more effective use of engineering technicians are the adequacy of training and the status of these technicians. One inducement to raise the level of training obtained by engineering technicians and to provide a measure of status for them is to extend some type of official recognition to those who meet minimum standards of training and experience established by competent authority. At several of these conferences speakers have suggested that such recogni-

tion might be in the form of an appropriate certificate. Canada already has had some experience with a certification program.

THE ONTARIO PLAN

In the Province of Ontario, a certification program has been established by the Association of Professional Engineers to give recognition and encouragement to engineering technicians. Under the Ontario plan, three grades of Engineering Technicians and one grade of Engineering Technologist are provided. A Certification Board appointed by the Council of the Association administers the certification program. Specifically, the Board makes the final decision on each application for certification after taking into consideration the merits of academic training and experience of the individual. The Board insures compliance with policies established by the Council and recommends policy changes to it. A Panel of Examiners assists the Board by examining academic qualifications of individuals and by making recommendations on matters of academic training. In order to give technicians representation in the administration of the program, two engineering technicians or technologists are appointed to both the Certification Board and the Panel of Examiners. In addition, an Advisory Committee of Engineering Technicians and Engineering Technologists advises the Board. Assisting the organization outlined above is the permanent staff of the Association.

Each application for certification is processed on an individual basis. The Panel of Examiners evaluates the academic considerations, while the Certification Board applies the experience factor

and is the final judge of the grade granted to the individual. The certification classifies the individual in a particular grade of Engineering Technician (grade 1, 2 or 3) or in the (single) grade of Engineering Technologist. Certification does not represent membership in the Association but is recognition of a person's qualifications in the light of his academic training and experience.

At present an individual who has less than Grade XII education may achieve certification if he has had progressively responsible experience which compensates for a lack of academic training. This provision extends up to and includes Engineering Technician Grade 3; beyond this grade, the applicant must establish the fact that he has appropriate academic qualifications, either by providing documentary evidence or by passing an examination.

The Ontario classification system may be summarized as follows:

Engineering Technician (Grade 1)

- Minimum educational qualifications: the Ontario Secondary School Graduation Diploma or equivalent provided the applicant has taken the science and mathematical subjects of Grade XII.
- Minimum practical experience (under approved professional engineering guidance): two years.

Engineering Technician (Grade 2)

- Minimum educational qualifications: Grade XIII Technical; or Grade XIII General Course (English Composition, English Literature, Algebra, Geometry, Trigonometry, Physics and Chemistry; or the Advanced Technical Evening Class (First Certificate); or ordinary National Certificate (U.K.); or other certificates of equivalent standing.
- Minimum practical experience (under approved professional engineering guidance): two years.

Engineering Technician (Grade 3)

- Minimum educational qualifications: completion of one year of an engineering course in a recognized university; or completion of a two-year technical institute course, the admission requirement to which is complete Grade XII standing or equivalent; or higher National Certificate (U.K.) without endorsements; or satisfactory completion of examinations acceptable to the Certification Board.
- Minimum practical experience (under approved professional engineering guidance): two years.

Engineering Technologist

- Minimum educational qualifications: completion of the first two years of an engineering course in a recognized university; or diploma from an Ontario Institute of Technology (3-year course) or other institutes of equivalent standing; or higher National Certificate (U.K.) with endorsements satisfactory to the Certification Board; or examinations established by the Certification Board.
- Minimum practical experience (under approved professional engineering guidance): one year for graduates of an Ontario Institute of Technology (3-year course); one year for candidates who have successfully passed the Certification Board examinations; for others, a period satisfactory to the Certification Board.

In practice, if an individual is engaged in a job which requires the supervision of a professional engineer, he may be certified as an engineering technician or engineering technologist. The initial classification depends upon the individual's previous academic training and experience; for this initial classification no examination is required. Once the individual has been certified, however, he usually realizes the amount of academic work he must do to qualify for the next higher grade. Thus a person having Grade XII or better is

eligible to attend advanced technical evening classes sponsored by the Ontario Department of Education in many Ontario communities; completion of such a class Grade I certificate qualifies him academically for engineering technician Grade II; completion of the Grade II certificate course qualifies him academically for engineering technician Grade III. When he completes the remaining subjects in a Syllabus of Examinations, he may qualify as an engineering technologist. As an example of individual interest, 652 engineering technicians registered in 1959 for evening courses in one educational institution in Toronto.

In the fall of 1960, there were 1,303 engineering technicians and technologists certified under the Ontario plan. Although this number has been estimated as being but a small part of the total number of persons performing engineering technician duties in Ontario, the number of certificates is progressively increasing, especially as understanding of the program becomes more widespread.

An indication of employer attitude toward the certification program is found in the encouragement which engineering technicians receive from employers to display their certificates. Some companies feel that the certificate is excellent proof of an employee's technical capability. An official of one large Canadian engineering organization stated that after studying and discussing the grading system with his wage administrative staff, he found that the system provides a very comprehensive solution to the problem of qualifying technicians and technologists. Interviews with other employers have brought forth similar statements of approbation.

The Association of Professional Engi-

neers extends to those who become certified some benefits normally available only to bona fide members. Such benefits include participation in the Association's group insurance plans, retirement savings plan and an investment program. A monthly *Newsletter* is published by the Association for technicians, and each technician also receives a monthly copy of the Association's *Engineering Digest*. From the broader view, the Association feels that proper recognition of engineering technicians will result in an improvement in the utilization of professional personnel.

THE CERTIFICATION PLAN OF NSPE

After careful deliberation on the values of a certification program for engineering technicians (including consideration of the Ontario plan), the National Society of Professional Engineers at its annual conference held in Boston in June, 1960, approved a plan to establish a certification program in the United States. Specifically, the governing board of the Society authorized its Committee on Engineering Technicians to organize an Institute for the certification of engineering technicians and engineering technologists. Under the plan, the Institute will determine by examination, endorsements, or otherwise the qualifications of all persons who apply for certification and grant a certificate in the appropriate grade to applicants who successfully meet the criteria for certification. Engineering technicians will be qualified in one of three grades: namely, Engineering Technician Trainee (ET2), Engineering Technician (ET) or Certified Engineering Technologist (CET). The Institute will be governed by a Board of Directors consisting of equal numbers

of registered professional engineers and certified engineering technologists. It is anticipated that the professional engineers on the Board will be selected from the fields of consulting, education, government and industry, while the certified engineering technologists will be selected by a group initially appointed by the Society. If a national society for engineering technicians and technologists is ultimately established, it is expected that this latter organization would select the certified engineering technologist board members.

Details of the procedure for examination of the engineering technician and engineering technologist have not yet been completed by NSPE, but it is expected that assistance will be obtained from key personnel of technical institutes, engineering colleges, government and industry and from representatives of appropriate technical societies. It is anticipated that the examination will be prepared centrally for the entire nation but administered locally with the cooperation of state societies of professional engineers, educational institutions and local organizations of technical societies. Examinations will be graded and evaluated by the Institute. It should be stressed that an affirmative decision in the individual case results in a certificate, not a license.

Like the Association of Professional En-

gineers, the National Society of Professional Engineers believes that the establishment of the certification program will lead to an increase in the education, training and work experience of engineering technicians and in a practical way will give recognition to this group. By the end of 1960, drafts of Articles of Organization and Bylaws for the Institute and preliminary criteria for certification in the established grades had been prepared by the NSPE Committee on Engineering Technicians. The date for placing the Institute into operation is early 1961.

THE OUTLOOK

The Ontario and NSPE programs for certifying engineering technicians have been reviewed at utilization conferences held under the auspices of the President's Committee on Scientists and Engineers and of OCDM. Discussions at such conferences indicate that the certification program, once fully activated, will provide a mark of recognition for engineering technicians who meet specific standards of education and experience. Resultantly, it is anticipated that the certification procedure will be an effective technique to enhance the role of the engineering technician and, hence, lead to better conservation of scientific and engineering manpower.

Teaching Machines*

HARRY F. SILBERMAN

THE CENTRAL problem in education is still the question of increasing the quality and productivity of each teacher. Workers in other occupations have increased in these areas primarily by technological innovation. Tools have been developed which permit the worker to improve the reliability of his product. Increased job status is, incidentally, correlated with increased productivity.

In education, however, the product is pupil learning, and there is a fear that the use of such technological methods as educational television will contribute to standardization of ideas which may lead to reduced emphasis on original and creative thinking. It is said that only through the interaction of teacher and student do the complex forms of learning occur.

This poses a dilemma. How can technological innovations be made to increase the productivity of teachers without sacrificing individual differences among students? Teaching machines may provide one solution to this problem. Complex auto-instructional methods are being developed with increasing capacity to be responsive to the individual student's performance. By way of definition, a teaching machine presents a unit of information

(usually in visual form), provides the student with some means of responding to this information, and gives him immediate knowledge of results.

Unfortunately articles are beginning to appear in the press with the type of headline which implies that teachers had better watch out lest robots take control. Nothing could be more detrimental to the development of automated teaching, save perhaps the indiscriminate sale of mechanically imperfect machines without accompanying tested programs.

Despite these headlines, most workers in the auto-instructional field view the machine as nothing more than the "binding" of the book. To be sure, the instructional items are the most important factor in the success of these devices, and without a well-developed program of materials the student will learn little or nothing despite the complexity of the machines. With a well-developed set of items, however, the machine may or may not make full use of the materials depending upon the interactions between these materials, the students receiving the materials, and the machine itself. To illustrate the range of complexity of these devices, it might be well to consider several teaching machines which have been developed.

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* This is the abstract of a speech delivered at the fall meeting of the Southern California Junior College Association at Santa Monica City College, October 15, 1960.

Historically, the auto-instructional method is not a new technique. Plato described the method as used by Socrates back about 400 B.C. More recently, Sidney L. Pressey at Ohio State began working on self-instructional tests in the early 1920's. He developed a self-testing machine which required the student to make an overt response to a set of multiple-choice test questions and then provided immediate knowledge of results, an important element in the teaching process.

Professor B. F. Skinner at Harvard has recently stimulated renewed interest in automated teaching by focusing his attention on the materials that are presented by the machine and developing sets of items with well-defined teaching subgoals. These item sets consist of a large number of small steps in a graded series of questions. Prompts and other cues are supplied in the items to help the student answer each one correctly. Skinner's machines require a write-in response and also provide immediate knowledge of results.

Norman Crowder of Western Design Division of U.S. Industries, Inc. has developed a teaching machine in which the student is given some information followed by a multiple-choice test question in each item. The student's choice of answer determines the next item to which he will be exposed. This machine shows some adaptation to individual differences among students in that different students see different items.

A more complex machine was developed by Gordon Pask of System Research Ltd., London, which has the feature of modifying the rate and difficulty of the task to suit the needs of the learner. His machine is a key-punch trainer which supplies visual cues for the student but

gradually withdraws the visual cues as the student's performance improves.

At a still higher level of complexity, one finds the computer-based teaching machine. The System Development Corporation has produced an experimental research machine consisting of a high-speed, general purpose digital computer equipped with a 600-slide random access projector and an electric typewriter. Each slide contains one multiple-choice instructional item. The student uses the typewriter to insert his answer and to receive his knowledge of results. The computer is programmed to select, in response to different errors made by the student, a variable sequence of slides from a projector. In this way each student receives instructional material suited to his needs. The computer branches to different material not only on the basis of errors but also in response to the length of time required by the student to answer questions. Students taking an excessive amount of time on a topic are branched to less difficult items. Students are also asked to evaluate their own performance. If they indicate that they are in trouble, they will be branched to lower levels or repeat previous items.

The System Development Corporation is now actively developing plans for a larger computer laboratory for automated school systems. One large, high-speed digital computer will be tied to several classrooms and will not only perform an instructional function but will also process pupil personnel records and administrative data in an integrated manner.

The impact of this movement to make technological innovations in education is not without its critics. Opponents to the use of these devices claim that the teaching process will be de-humanized by cold,

impersonal machines. They criticize the method as a return to traditionalism and insist that the rote learning which does take place will not transfer to meaningful situations outside the school. It is argued that even if the teacher were simulated in much greater detail the dynamic qualities of the teacher are essential to education, even in subject matter areas. Teaching machines are also criticized for contributing to increased standardization of vocabulary and ideas.

Of course, the ultimate test of teaching machines is empirical. Available evidence indicates that this method is effective. In the SDC laboratory a number of variables have been explored in various experiments. Hopefully this research will result in principles of machine instruction which will be useful both in the design of equipment and instructional materials. Studies have been made with junior college students with psychology and logic as subject matter. Some of the findings from one study indicate that significant learning occurs with these devices; multiple-

choice items are just as effective as fill-in items and take less time; small item steps do result in more learning but at the expense of taking more time; and branching among items results in more efficient learning.

Another study showed that some errors can be committed on training items without depressing a student's learning of the subject matter. This is important when one wishes to use errors to determine what materials to present next. A more recent study completed in the SDC laboratory indicates that permitting the student to branch among the instructional materials at his own option is an effective teaching procedure. Another study in the Systems Development Corporation laboratory has shown that tailoring the sequence of items to the needs of the low aptitude student requires a set of remedial items quite different from those he was receiving prior to the remedial detour. The SDC is continuing research on auto-instructional methods. The goal remains the improvement of educational practice.

This I Tried and Found Helpful

Acceleration of Selected High School Students

Harold E. Wilson, Itasca Junior College, Coleraine, Minnesota

Certain students upon recommendation of their high school faculty were offered the opportunity to take college mathematics or English at Itasca Junior College before graduation from high school. These students were selected from two high schools; one group started as high school juniors; the other as high school seniors.

All students successfully completed the college courses. However, one or two students who thought they were interested in mathematics now have no further interest in this field. For pre-engineering

students too long a time elapses between completion of calculus and its use in engineering problems. The high school juniors did not seem at ease in the program, and the scheduling presents a problem when the high school is not close enough to the junior college building.

In light of the experience at Itasca Junior College, it would appear that the program should be confined to high school seniors, and it might be expanded to include other subject areas such as chemistry, biology, etc.

Junior College Leadership Program

FREDERIC T. GILES

COOPERATION between the American Association of Junior Colleges and the W. K. Kellogg Foundation of Battle Creek, Michigan, has resulted in the establishment of a program which is unique in the history of the junior college movement and which, it has been said, serves the cause of junior college education more than any other single development in the field at this time. Financed by grants of over \$1,600,000 from the Foundation and guided by recommendations from the Commission on Administration of the Association, ten universities have set up centers for pre-service and in-service training of junior college administrators. These centers are furnishing a dynamic answer to the urgent need to prepare top-quality administrators for the ever-growing crop of junior and community colleges. The entire program is given "continuity" by the Commission on Administration which serves as the connecting link between the centers and the Association.

NEED RECOGNIZED

The need for new and improved programs to increase the supply of qualified junior college administrators has been evident to the directors of the Association for some time. Not only have junior colleges grown rapidly in number in recent

years, but they have also increased in size and complexity, requiring men of the highest ability and wisdom as administrators. Finding enough men of this caliber to fill the necessary positions poses a real problem even now, a problem which will grow more acute in years to come. The *Junior College Newsletter* of October 28, 1959, states:

The problem of locating and preparing executive personnel is one that faces many kinds of institutions. This applies in the fields of government, industry, health and welfare, and education, among others. Population statistics indicate that during the next twenty years the United States will feel the pinch of limited numbers of men and women in the age groups from which usually come executive and administrative leadership. The need for more personnel at decision-making, responsible levels will also increase as our society advances technologically and as our governmental and social institutions become more complex. In the field of junior college education steps must be taken now to assure a continuing supply of highly qualified administrators.

Concurring with the Association in this view, the Kellogg Foundation made a substantial financial commitment to the Association (for a stepped-up program of professional service) and pledged that additional grants would be awarded to universities establishing centers for the training of junior college administrators.

The Commission on Administration, which was selected to initiate the new

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leadership program, lost no time in getting to work. The Commission met in Chicago in early November, 1959, and drafted a statement concerning the type of educational experiences needed to prepare and refresh junior college administrative leaders. The statement was designed to be helpful to universities offering programs of junior college leadership training, whether or not these programs were supported by Foundation grants.

COMMISSION RECOMMENDATIONS

"Guidelines for University Programs in Junior and Community College Administration," herein quoted, shows the concern of the Commission members with training junior college executives who will be education leaders in their communities as well as skilled administrators in the technical sense.

I. Suggested guiding principles for the operations of programs in university centers.

1. Provisions should be made for drawing upon the experience of practicing administrators both in the formulation of the programs and in their continuous operation.
2. Programs should be so guided as to emphasize the preparation of *junior college* administrators, although the relationship among all levels of higher education must be given consideration.
3. Programs should be flexible and participants are encouraged to draw upon all resources of the university in the pursuit of their respective objectives. Arrangements for this inter-disciplinary approach should be worked out cooperatively by the various colleges of each university.
4. The American Association of Junior Colleges and the university centers should establish and maintain close relationships to encourage communi-

cation and exchange of ideas while recognizing the necessary role of the universities in operating these programs.

5. Objectives of these programs should encompass more than the imparting of technical skills necessary to the job of college administrator. The administrator must be viewed as an intellectual leader of the community with special responsibilities and opportunities for service.

II. Suggestions regarding in-service programs.

1. Attempts should be made to develop programs of value to newly appointed administrators as well as to those persons already in the field.
2. Consultant services should be made available to junior colleges for the purpose of helping them to raise their sights and to inspire them to greater efforts. Experienced administrators of junior colleges could serve admirably in consultant capacities. Perhaps members of the five commissions of the American Association of Junior Colleges could be called on for some of this work. As an in-service device, this program could involve administrators who would not otherwise have the opportunity of visiting new campuses and gaining new insights while offering their services as consultants on specific problems.
3. Seminars and workshops can be established covering a wide range of topics or concentrating on one or two major concerns. Institutes such as that offered by the Harvard University Graduate School of Business Administration for university and college presidents might be emulated. The various needs felt by different administrators can be a subject for discussion between the staff of the university centers and members of commissions of the American Association of Junior Colleges. Short-term workshops and institutes covering several weeks during the summer should be given consideration.

It is recommended that some sessions for the wives of administrators be held in conjunction with these programs.

4. Consideration might be given to drawing in not only junior college presidents but also deans and other administrative staff, and possibly members of boards of trustees.
5. Strong emphasis should be placed on a study of, and actual experience in, the making of community surveys essential to curricular development as well as for business, civic and other groups, and the administrator should be encouraged to explore other avenues for the advancement and enrichment of local community affairs.

Care should be exercised in the selection of projects to insure their having intrinsic value for the learning processes experienced by students.

6. Consideration should be given to setting up "refresher" or retraining opportunities for the administrator which would have some continuity. For example, after completing an in-service program, an administrator might attend an institute the following summer, and then another such project two years later.

III. Suggestions regarding pre-service programs for preparing administrators.

1. Pre-service programs should be offered at the doctoral level.
2. It is important that there be some selective process set up to insure the registration of students with a high degree of ability, past achievement, and promise. Some of the criteria for selection might include the following:
 - (a) M.A. degree in some subject field
 - (b) Successful teaching experience
 - (c) Demonstrated successful administrative experience
 - (d) Experience in junior college work
 - (e) Potential for making significant contribution to the field of junior college education
 - (f) Evidence of some knowledge and understanding of the role of junior college education

- (g) Personal attributes that indicate a potential for success in junior college administration
- (h) Recommendation from head of junior college where person is employed

3. Arrangements should be made by the university centers with junior colleges to provide on-the-job experience (internships) as part of the student's training.

IV. Possible objectives of both in-service and pre-service programs.

1. To develop the philosophy and concept of the junior and community college.
2. To develop the essential characteristics of junior college administration.
3. To develop a working knowledge of the many fields a junior college administrator must concern himself with, even though this may mean not studying some phases of administration in great depth. (Use internships worked out cooperatively with junior colleges.)
4. To develop the concept of the educational administrator serving as an intellectual leader of his community, dealing with the world of ideas and not only the technical aspects of college administration.

V. Suggestions regarding stipends for covering expenses of students and administrators.

1. Stipends in amounts ranging from \$1,500 to \$3,600 might be offered through a program of fellowships, assistantships, scholarships, etc. depending on the individuals needs.
2. Individuals participating in these programs should be expected to make some direct financial or other contribution to their own education.

VI. Evaluation and Review.

The American Association of Junior Colleges recommends the continuous evaluation of programs through the cooperative efforts of the Association and the

universities, with the assistance and advice of persons especially qualified for this work. Students, administrators, university center staff personnel, and others cooperating in these programs can assist in the evaluation process.

FIRST GRANTS ANNOUNCED

The junior college leadership program moved from the planning stage to the realization stage last March with the announcement by Dr. Maurice F. Seay, director of the Division of Education of the Foundation, that four-year commitments totalling over \$800,000 had been made to five universities to establish centers for the training of junior college administrators. The five institutions were the University of Texas, the University of California at Berkeley, the University of California at Los Angeles, Stanford University and Teachers College of Columbia University. These universities had submitted proposals for grants directly to the Foundation, and all arrangements were made between the selected universities and the Foundation.

Soon after this announcement was made, representatives of the Commission on Administration met in Los Angeles with personnel from the university centers (those mentioned above and the University of Florida and Florida State University, which had been accepted in the interim). That meeting was devoted primarily to planning ways of coordinating the activities of the centers and to outlining the role of the Association, or more specifically, the Commission on Administration, in relation to the centers.

That role was spelled out in detail as follows:

1. Help recruitment in the selection of students.

2. Disseminate information. (This involves public relations functions.)
3. Recommend research areas and problems.
4. Provide for communication among centers through meetings and publications.
5. Serve as an advisory committee at the national level.
6. Evaluate.

The opportunities which exist under the new program for junior colleges to develop programs for executive improvement were also discussed at the Los Angeles meeting.

PROGRAM ENTERS SECOND PHASE

Since the meeting last March, three Michigan institutions—the University of Michigan, Michigan State University and Wayne State University—have established leadership training centers with the aid of grants from the Foundation. Statewide coordinating bodies have been set up in California and Michigan to insure institutional cooperation, and in Florida the two university centers are being coordinated by the Florida Board of Control. The university centers are also setting up advisory councils composed of selected junior college administrators from their areas.

Thus ends the first or "developmental" phase of this unique program. The second or "evaluation" phase began in December when a committee of the Commission on Administration, appointed to serve as liaison between the Association and the universities, met to discuss "progress and prospect" with the directors of the centers. All of the centers reported on the various phases of their programs as they are developing. There is a great diversity in the various programs as the centers attempt to meet the needs in their regions. The programs include summer seminars and workshops for new administrators and

present administrators, conferences for administrative teams, monthly seminars, in-service training, and internships, as well as the regular leadership programs. The group has agreed to make evaluations of the program the main concern during

1961 and will make use of other evaluative agencies in their work. The Junior College Leadership Program has thus been launched and is a reality, and the benefits will accrue to the increased junior college development in this country.

This I Tried and Found Helpful

Improving Writing in Sub-Freshman English

Frederick P. Kroeger, Flint Junior College, Flint, Michigan

FREQUENTLY the freshman student who is assigned to a sub-freshman English class in which a grammar workbook is used finds himself in the strange position of being able to do the workbook exercises with a fairly high degree of skill but unable to write an acceptable theme. To solve this problem, the writer asks students to write and hand in at least a paragraph every day on any subject they choose. Enough of these items are marked so that the student may keep a score card of the types of errors he habitually makes. He soon becomes aware of the errors he must watch for and acts as his own editor. At the same time, of course, instruction in modern grammar, word group and sentence patterns is being given in class. Also, the student is taught how to analyze a written passage both for content and for logical presentation, as well as to look for methods of transition, coherence and other writing techniques.

His editorial ability is improved with this reading analysis and his daily writing. He also does workbook exercises in all the usual areas but recites the workbook answers in class and gives the reason for his answer, if possible, without referring to his answer sheet. He attempts to determine the answer as if he had not al-

ready done the exercise. He is made to understand that he is in the class to make mistakes, and he is to volunteer every time he is not sure of the correct answer so that he will be able to spot his particular deficiencies and receive help from other members of the class or, if necessary, from the instructor. This creates a cooperative atmosphere in the class so that later when the students begin to criticize each other's daily papers, they will all realize that the criticism is friendly and helpful.

During the last one or two months of the semester, students grade each other's papers. By this time they are used to spotting errors because they have some skill in close reading and analysis and have been using both their workbooks and their own papers as workbook exercises to develop their critical and editorial skills. After a student grades another's paper, he makes a written comment and returns the paper to its author. He is encouraged to discuss the paper with him. The author must read and correct the written commentary by the grader. Following this procedure, the instructor marks the papers to see if there are other errors and then returns them to make the students feel that he, too, is participating in their education.

The Role of the Administrator in Community College Plant Planning

CLYDE E. BLOCKER

THE RAPID expansion of higher education in the United States has created a number of serious problems, one of which is that of providing adequate physical facilities for the millions of students who will clamor for a place in colleges in the future. It has been estimated that there will be 3,953,000 individuals enrolled in colleges and universities by 1965.¹ This is an increase of 1,294,000 enrollments over 1950. Enrollment increases since 1950 have already forced more rapid campus construction; vis-a-vis, a survey of 1,368 colleges and universities indicated that construction will double during the period 1956-60 as compared to the five years 1951-55.² Many states are planning expansions of existing institutions and, in addition, as in the case of Michigan, New York, Florida and California, will establish many new community colleges to provide essential post-high school educational opportunities for all.

Responsibility for the planning of new campus buildings, sites, walks, streets, utilities and other educational facilities is, in most community colleges, delegated to the chief administrator by the board of control. When discharging this obligation, the administrator finds that he must work with a number of groups and indi-

viduals to translate planning into the finished product. This responsibility demands the highest type of administrative and leadership ability, for the completed physical plant will reflect the success or failure of the administrator to effectuate the necessary compromises which are an essential part of group planning and action.

Morrison has outlined the five steps in planning community college buildings.³ These procedures have been tested in a variety of situations and provide a sound approach applicable to most institutions. Although such procedures provide a framework within which plant development can take place, administrative leadership and effective coordination are necessary to produce an effective educational plant.

A typical community college has a number of "publics" which are interested in the development of the institution. These include: the board of control, students, faculty, the community and the do-

¹ *Manpower and Education*, Educational Policies Commission, N.E.A., Washington, D. C., 1956, p. 66.

² W. R. Bakelman, "College Construction Rate Doubles in Five Years," *Higher Education*, October, 1957, p. 30.

³ D. G. Morrison, "Planning Community Junior College Buildings," *Higher Education*, December, 1957, pp. 57-59.

Since 1955 CLYDE E. BLOCKER has been
Dean of Flint Junior College, Flint, Michigan.

nor or donors of private funds. In addition, the administrator must work closely with the architect and state and federal agencies when appropriate. Each of these groups performs important functions in a complicated, informal system of checks and balances from which will emerge the campus plan and physical plant.

The board of control has a number of important functions. This policy-making group will control the development of the physical plant by:

1. Approving the educational philosophy of the college.
2. Accepting and supporting the educational objectives of the institution.
3. Providing financial support for the educational program.
4. Making available funds for capital expenditures.
5. Delegating administrative latitude to the executive officer to permit the execution of his responsibilities.
6. Accepting site plans and recommendations.
7. Appointing the architect.
8. Approving the ultimate size and capacity of the plant.
9. Determining the immediate objectives of the building program.
10. Evaluating the physical plant as it grows.

Individuals who live in the service area of the community college and support the program with tax funds also have an interest in and influence upon the development of the facilities. The impact of this "public" is felt through citizens' committees, personal contacts with board members, administrators, faculty members, students and a variety of other ways. The community role is best expressed through the questions they are likely to raise regarding the campus:

1. Is the campus being developed economically?

2. Are the various buildings and the campus site in general consistent with the community "image" of the college?
3. Is the appearance of the plant pleasing but not too expensive looking?
4. Are the buildings and site designed with an eye to easy access, efficiency of operation, economy?
5. Does the campus compare favorably with similar colleges in nearby locations?
6. Will the plant encourage more young people to attend the institution?

The faculty plays one of the most important roles of all groups in the development of the plant. They, as a group, spend their working hours in the buildings, and their effectiveness will be expanded or limited in direct relation to the adequacy of the buildings and equipment provided for their use. In addition, the faculty has a wealth of information and experience of great value in the planning process. The campus that is planned and built without faculty participation is, in most cases, not an efficient educational facility.

The faculty will show greatest concern about the following:

1. Physical conditions in the classrooms and laboratories (lighting, blackboards, furniture, ventilation, noise levels, size of rooms, curtains for light control, etc.).
2. Office space adequate for counseling, study and other educational purposes.
3. Sufficient storage space in or near classrooms and laboratories.
4. Faculty parking.
5. Faculty lounges and cafeteria facilities.
6. Easy pedestrian accessibility from building to building.
7. Adequate facilities for specialized equipment (audio-visual, scientific).
8. Library facilities for faculty.

Students attending a college have not had a traditional role in the planning of the campus. There has been an unfortu-

nate assumption of immaturity of students which, in today's colleges, is not justified. Students have many valuable ideas and suggestions to contribute to plant development, and, in addition, they have an important personal and educational interest in the institution. They should be involved in the planning process, at least in relation to the areas having to do with the student activities and extracurricular programs.

Students will be interested in the following:

1. Accessibility of parking facilities.
2. Easy accessibility of classrooms and laboratories.
3. Adequacy of cafeteria facilities.
4. General appearance of the buildings and campus.
5. Adequacy of student lounges.
6. Student offices and conference rooms.
7. Check rooms.
8. Library facilities (visual, audio, books and all other types of materials).

The architect plays a vital role in the development and construction of the plant. He enters the picture long before the first spade turns the ground by being included in the initial development of plans and recommendations. He performs his greatest service by assuring the board of control that the building or campus will meet the traditional architectural criteria: commodity, firmness and delight, meaning, efficient function, sound structure and pleasing appearance.

The role of the architect follows this general pattern:

1. Study educational specifications in cooperation with designated individuals and committees.
2. Cooperate in the selection of the campus site.
3. Develop a comprehensive site plan for the campus.

4. Evolve cooperatively with others the overall plan of the campus or building.
5. Provide complete plans and specifications for the buildings.
6. Advise the board of control on the selection of the contractor, if appropriate.

If the campus development or building is being financed wholly or in part by private funds, the donor may desire certain features or limitations. He may impose limitations on the size of a building or make suggestions regarding the campus site plan. In many cases contributions from private sources include specific directions which are accepted by the governing board at the time the gift is accepted.

State and federal agencies impose conditions which affect the construction of the plant in many instances. Most states have health and safety requirements which must be included in all buildings. Federal limitations may be a factor if such appropriations are being used for capital purposes. State and federal rules do not, as a general rule, affect the appearance or utility of campus buildings.

The administrator finds himself in a sea of opinions, prejudices, vested interests and regulations when he begins the process of physical plant planning. Members of each of the eight groups involved in the process bring with them relevant and irrelevant, rational and irrational attitudes and fragmentary knowledge, all of which must be rationalized in the planning process. The end result, the physical plant, may become a symbol of the achievement of the ideals and aspirations of most of the people involved, or it can be a lasting monument to frustration and general dissatisfaction.

The perfect physical plant has never been built. The administrator must accept the fact that the campus and buildings

will be, at best, the sum of many compromises between ideals and reality. In order to achieve even this less than perfect result, the administrator must bring three essential qualities to the negotiations—knowledge, leadership and unity.

The administrator must perform an objective coordinating role in cooperation with individuals and groups who have important but incomplete knowledge of the total situation. His knowledge must be general in character but specific enough to enable him to evaluate the recommendations of others. He must constantly bring to all discussions an objective overview of the entire project. His responsibility includes the dissemination of information about the short- and long-range goals of the college, its philosophy of education, span of services, present and projected size and financial resources. His knowledge will provide avenues for expansion and enrichment and will also impose limitations which will shape the direction and ideas of all involved groups. He will serve as the resource person who will mold the diverse facts and the attitudes of all those involved into a coherent whole.

He will, in his central role, discover unforeseen resources in the groups with which he will work. A board member might have extensive experience in the construction business or friends who could provide much needed information. Faculties have in their membership individuals who have specialized knowledge of value to the project. Even students, so long ignored, show astonishing insight and understanding of their needs and attitudes, such information being of great import to the ultimate design of the building or campus.

The administrator also contributes his personal knowledge and experience to the plan. He can help people understand better the desires and needs of others through his own factual knowledge derived from personal maturity and breadth of background. Although he should not try to dominate all considerations of the project, he should not be reticent about making known his ideas and concepts regarding the needs of the college.

The second contribution of the administrator to physical plant planning is positive leadership. His role cannot be a passive one. He must explore, contribute, coordinate, compromise, stimulate and restrain participants' activities. This quality of leadership is best illustrated by the three types of planning essential to orderly change and the achievement of desirable goals: strategic, functional and evolutionary.⁴

He must guide the planning process on these three levels simultaneously. First, he must provide perspective for strategic planning which is the cause and effect reasoning that will make possible the attainment of the desired end—an effective physical plant. Second, he must lead the way in functional planning which is the recognition and reaction to the interdependencies of the purposes, goals of individuals and institution. The responsibility for functional planning—consideration of all details as a part of a complete system—is shared with the governing board and depends upon effective communication on both the intellectual and emotional levels. Third, the administrator, in cooperation with all involved

⁴ C. I. Barnard, *Organization and Management* (Cambridge, Mass.: Harvard University Press, 1956), pp. 169-72.

groups and individuals, must carry on evolutionary planning before and during the time the project develops. Evolutionary planning is the attainment of future goals through a series of intermediate goals. Such planning undergirds the development of the final goals of the institution. It also makes possible the continued functioning of the organization during the changes and adjustments in all phases of the operation throughout the planning and construction period.

The administrator must continually insure effective communication among all participants in order that they understand the needs and objectives of all other groups. Communication is the mortar which gives cohesion to the inherent diversity of personalities and makes possible the realizations of the objectives to be achieved. The administrator must also direct the flow of technical, financial and

educational information with tact and efficiency so that it is used constructively and does not become a hindrance or a center of controversy. This function implies constant explanation and interpretation of data to individuals and committees.

The administrator, then, plays the central role in equating the physical plant to educational needs. He must secure and utilize the knowledge and help of many different people who, because of their dissimilar attitudes and points of view, can help plan a campus which will include both utility and aesthetic values. His skill as a leader and mediator may be sorely tried by the vicissitudes of human behavior, but his reward will be an educational plant which will fulfill the dreams and aspirations of generations of students.

This I Tried and Found Helpful

Committee on Professional Advancement

John C. Gill, Jr., Chowan College, Murfreesboro, North Carolina

In the late fall of 1960, the president of Chowan College appointed a faculty committee on professional advancement, and at a recent faculty meeting, the committee presented its first progress report, a mimeographed copy of which was given to each faculty member. It concerned several areas important to professional advancement, and each was considered on a departmental basis.

Section I of the report, "Learned Societies," listed by departments several of the more respected societies along with the cost of membership in them. Section II, "Graduate Programs, Scholarships, and Foreign Study," consisted of current information for faculty members planning additional study. Section III, "Pro-

fessional Meetings at which Attendance Is Desirable on the Part of Chowan Faculty Members," gave a list of the meetings, but the committee stated that it was not mandatory for all members in each department to attend every suggested meeting.

The progress report was completed with several suggestions concerning a fair basis on which the financial costs of attending professional meetings might be met as well as suggested departmental budget amounts for this purpose. Chowan's president indicated he felt the committee's work would prove to be a significant factor in future efforts to strengthen the college's academic program.

A Laboratory of Knowledge

CHARLES E. ROLLINS

AT A RECENT meeting of the National Student Association the youthful president, in addressing the group, made several critical statements about his own age group. He said, "We are not a silent generation, but we are a soft generation. We are not beat, but we have never really tried. We are not ignorant but we are unwilling, largely unconcerned." Then he made a very telling point: he called for *student responsibility* in the educational process.

This point has been under consideration by the York Junior College faculty through its entire committee structure, particularly through the Curriculum Committee. In the spring of 1960, this committee made the first of what is hoped will be many changes or adjustments in order to attack the problem of improving instruction and giving the student more responsibility in his own education.

After considerable discussion, the committee invited the top 25 students to attend a series of discussions on "Challenges to Modern Man." The student group consisted of 15 sophomores and 10 freshmen chosen on the basis of achievement on the grade point index. The meetings were set for an hour and a half in length, in the evening, and spaced two weeks apart. Attendance was voluntary, and no credit was

given. Four of the students invited had evening classes at the arranged times and were unable to attend.

Six meetings were set up to deal with the following topics chosen by the faculty:

1. Man and his education.
2. Man as an individual.
3. Man as an ethical being.
4. Man and his economic problems.
5. Man and his political problems.
6. Man and his social problems.

Each meeting was conducted with the guidance of two resource persons selected from the faculty by the Curriculum Committee. Faculty members thus selected were chosen because of their valuable experience in particular areas (experience was considered valuable if a faculty member had studied or taught in the area and had done so in depth). These resource persons changed, usually one at a time, from meeting to meeting, presenting always a multiplicity of facets—academic and personal, as well as ethical, economic, political and social—to quicken interest in the high caliber students in order to help them participate comprehendingly in the seminar. Yet, because there was a resource person to carry over from meeting to meeting, the purpose of the seminar flowed in its intended course continuously. The resource persons presented varying points of view, often with vigor. Several times they used the dialogistic method with one questioning the other intently

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and in turn being questioned by his colleague and more often than not being questioned by the students, so that the dialogue became resource person-student and not just resource person-resource person. This ancient technique of instruction (cf. Plato's Socratic dialogues) has been revived in several European universities and proved especially effective in this seminar setting.

Two weeks prior to a meeting the student participants were given lists of suggested readings pertaining to the area to be discussed. Included in this list was a set of questions which they could ask themselves in order to precipitate intellectual activity in the specific area of consideration. A student who had an enduring interest could steep himself in background material in a special area, while others not so vitally concerned with that area or those who already had some proficiency in it could read in review, each at his own discretion. Of course the value and effectiveness of this preparation could not be weighed objectively; however, it is of interest to note that there were 21 potential participants, and all 21 participated at one time or another. Also, the average vocal participation of the group was 70 per cent, which is important since this was a purely voluntary, non-credit offering of the college.

At the last meeting, the students were asked to evaluate the discussions and point out the strengths and weaknesses of the seminar as they saw them. In general, the reactions were as follows:

1. The opportunity to participate freely in an exchange of this sort was greatly appreciated. The students felt that formal college classes were too structured to permit a good

interchange. The crystallization of class sessions into one main "news report" was considered non-effective for true learning.

2. Much knowledge was gained of academic areas other than the students' major fields. This was helpful in their regularly scheduled classes.
3. The dialogistic method which was used in several of the meetings was pinpointed as being particularly meaningful.
4. There was a need expressed to "go on from here" in planning further seminars of this general type. One seminar would be less valuable than no seminar at all, in the minds of the students.
5. Students felt that more of their classmates should be exposed to this type of learning situation, including the intelligent student who is not making top grades. Thus, classroom activity should approach the seminar-type presentation.
6. They felt that there should be more definite reading assignments. Not enough students sated themselves; they realized that they would have benefited more from the meetings if they had read more.
7. The topics should have been more specific. The desire to settle precise problems precisely was evident.

The faculty members who participated felt that the appreciation of instructors in other areas was enhanced and that cross-fertilization of ideas among the disciplines would be helpful in combating narrow specialization.

On the whole, the reaction of the York faculty and students indicated a need to continue this kind of activity. It is the intent to utilize student help in planning the continuing discussions for the current year. In this way it will be truly a student activity, yet guided by intellectually responsible persons so that it does not degenerate into a "pooling of ignorance," but rather becomes a "laboratory of knowledge."

Sabbatical—Full or Half Salary

STUART E. MARSEE

EVERY COLLEGE has some type of sabbatical leave program; most schools provide the usual program with a leave every seventh year at half salary. This plan has the dubious advantage of placing such a financial burden on the instructor with family or other financial burdens that only a relatively small per cent of the staff members avail themselves of this opportunity. Regarding the then existing policy of El Camino College, and with this very real limitation in mind, the trustees of El Camino College in 1958 decided to amend its policy to make possible the true purpose of the sabbatical—that of increasing the teaching effectiveness of the faculty member and his usefulness to the college.

After much deliberation, a sabbatical policy was adopted that provided an option to the standard plan of a leave after seven years' service at half pay, or a sabbatical after the same period of service at full pay for one semester. In both cases there is the proviso that no more than three per cent of the faculty may be on sabbatical in one academic year.

As would be expected, the response to a plan that would provide full salary for a semester was overwhelming. Instructors who had never dreamed of a leave began to study travel folders. Applications for

leave were filed two and three years in advance and, in some cases, for several consecutive years to enhance the possibility of being selected.

In an effort to develop necessary controls and to insure equity of selection, a committee of faculty members including Dr. Gordon Orme, Dr. Donald Hein, Mr. John Dulin, and Miss Helen Shipley was formed to develop rules for administering the policy. Administrators, Mr. John de la Haye, Mr. John Morrow, Mr. Merl Sloan, Mr. Carl Arfwedson, Dr. William Harness and the president of the college completed the personnel of the committee. From its inception in September, the committee met almost weekly until the rules were adopted late in November.

The following rules were adopted and are working effectively:

I. Purpose of Leave

Sabbatical leave of absence is a privilege accorded to qualified members of the faculty for intellectual refreshment, normally to be attained by study, research, travel, or other creative activity. Its ultimate objectives are the enhancement of service to El Camino College and the increase of its distinction. The sabbatical leave of absence is not any earned right but is a privilege which may be granted by the Board of Trustees. It is expected, therefore, that applications will be accompanied by a statement of an acceptable program which the applicant pro-

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poses to follow while on leave, and that on return to regular duty he will submit a report on the results of the leave as a record of faculty growth and for retention in the college files. (Authority Education Code Section 13673.)

II. *Eligibility*

An applicant for sabbatical leave must have rendered service requiring certification in the El Camino Junior College District for at least seven consecutive years immediately preceding the sabbatical leave. A leave of absence, except a sabbatical leave, does not count as a break in continuity of service. (Education Code Section 13674: "No leave of absence shall be granted to any employee under Section 13673 who has not rendered service to the district for at least seven consecutive years preceding the granting of the leave, and not more than one such leave of absence shall be granted in each seven-year period. The governing board granting the leave of absence may, subject to the rules and regulations of the State Board of Education, prescribe the standards of service which shall entitle the employee to the leave of absence. No absence from the service of the district under a leave of absence, other than a leave of absence granted pursuant to Section 13673, granted by the governing board of the district, shall be deemed a break in the continuity of service required by this section, and the period of such absence shall not be included as service in computing the seven consecutive years of service required by this section. Service under a national recognized fellowship or foundation approved by the State Board of Education, for a period of not more than one year, for research, teaching or lecturing shall not be deemed a break in continuity

of service, and the period of such absence shall be included in computing the seven consecutive years of service required by this section.")

III. *Extent, Distribution and Compensation*

1. Certificated employees granted sabbatical leave for one semester shall be paid full salary during such leave.

2. Certificated employees granted sabbatical leave for a period of one school year shall be paid one-half salary for the school year in which the sabbatical leave is taken.

3. No more than 3 per cent of the faculty may be granted sabbatical leave in any one school year. (Amendment to Bylaws, approved by the Board of Trustees at their meeting of June 8, 1958.)

4. A certificated employee who is granted sabbatical leave of absence shall receive, when sabbatical leave salary is computed, such automatic changes in salary rating as would have been received had he remained in active service.

5. Method of payment. Employees on sabbatical leave will be paid at the same intervals as they would for their normal pay period.

IV. *Criteria*

Equal value shall be given to study, research, travel, or other creative activity or a combination of these criteria.

V. *Priority*

All departments of the school will be given equal consideration in determining priority.

VI. *Seniority*

Seniority shall be defined as starting with the first day of paid service as a regular full-time certificated employee of

the El Camino Junior College District. Seniority in terms of years of service shall be the first consideration when making a selection of candidates. Seniority for those who have been on sabbatical leave from El Camino College shall start again with the first day of paid service of a regular semester upon returning from sabbatical leave.

If two or more people have equal seniority in terms of years of service to the college and if one has reached the last possible time to take a sabbatical leave according to the age deadline (see next paragraph), or lose his opportunity ever to take one, he shall be given preference.

VII. *Age Deadline*

The last possible time for an applicant to take sabbatical leave will be such that there shall be two full years remaining for the instructor to serve the school district prior to the end of his legal tenure.

VIII. *Bond*

A bond will be required unless the Board of Trustees approves a Leave of Absence Agreement in lieu of such a bond. If a Leave of Absence Agreement is substituted in lieu of a faithful performance bond, the employee must render two full years of service immediately following his return from sabbatical leave. Failure to perform will result in a payment to the district by the employee from the sum received proportionate to the time of failure to meet the obligation of teaching in the two-year period.

IX. *Accident or illness*

Interruption of the program of study or research caused by serious accident or illness during a sabbatical leave, evidence

of which is satisfactory to the Superintendent, shall not prejudice an employee regarding the fulfillment of the conditions concerning study or research on which such leave was granted nor affect the amount of compensation to be paid such employee under the terms of such sabbatical leave; provided, however, that the Superintendent has been promptly notified of such accident or illness, which in general shall be registered letter mailed within 15 days of such accident or illness.

X. *Return to Service*

At the expiration of the leave of absence the employee shall, unless he agrees otherwise, be reinstated in a position equivalent in duties to that held by him at the time of the granting of the leave.

XI. *Report on Sabbatical*

Each employee returning from leave shall file a written report with the Superintendent. It is suggested that this report be planned in consultation with the Superintendent before the leave is taken. When formal college credit has been earned during the leave an official transcript will be required also.

XII. *Application*

Applications for sabbatical leave of absence will be accepted for the following school year between the dates of September 15 and October 15, inclusive. Should an application be denied for lack of a suitable plan, the applicant will be given an opportunity to improve his plan and resubmit his application within a period of two weeks from the date of notification that his plan is not acceptable.

Besides the 3 per cent of the faculty who are allowed to be absent on sabbatical

leave of absence during one year, a list of alternates will be established each year to stand by in the event a change of plans of applicants or increase in staff permits additional grants.

Sabbatical grants will be made for the school year and not the fiscal year.

CONCLUSION

A review of the rules highlight the fact that with presentation of an acceptable plan, the majority factor in selection is seniority as a certificated employee on the staff. Of further interest is the fact that the use to be made of the sabbatical is not too limited. Some institutions are more restrictive in the nature of study and the number of units to be taken before the instructor may qualify for leave. Others specify the length of time an instructor must remain in travel status. Experience has not indicated that these restrictions are necessary, at least at the present time.

El Camino College has not stated how many words should be included in the report on sabbatical. It is understood that each year the reports are to be bound and made available to anyone who might wish to read them.

The question often arises regarding the cost of a semester leave. In the case of El Camino College it is firmly believed, assuming the quota would apply for the full year, that the semester plan is no more costly than the full year plan. This is so because, unless unusual circumstances prevail, the instructor on semester leave is required to take it during the second semester. A history of lower enrollment during the second semester makes such an arrangement mutually beneficial to the college and the instructor. In most cases this alleviates the necessity of a substitute instructor who is generally required when leave for a full year is taken.

This I Tried and Found Helpful

Improvement of Learning

Norman E. Watson, Orange Coast College, Costa Mesa, California

ORANGE COAST College has constructed a 300-seat forum building especially designed for large group presentation with the use of a wide variety of newer media. A speaker's console has been built incorporating the following electronic controls: rheostats for the control of house lights, switches for the control of spots, switches for the control of curtains and screens, volume controls for p.a., tape recorder with all controls, turntable with all controls, FM-AM radio with all controls.

In the back of the room a booth has been equipped with an opaque projector, 16 mm motion picture projector, 35 mm

slide film projector, 35 mm strip film projector, and tape recorder, as well as dual controls for screen, curtains, lights and sound. Sliding panels installed on the platform area permit preparation of blackboard or bulletin board material before the class starts and while the building is being used for another class.

Discussion group meeting centers are available as well as tapes for lectures. A television camera and monitors are available as audio visual aids. A program director and technician will be employed to complete the project.

Establishing a Geology Curriculum in the Junior College

ALBERT J. COPLEY AND R. HALLIBURTON, JR.

SOME JUNIOR colleges have avoided enlarging their curriculums in the direction of the geological sciences because they are unaware of the comparative ease with which it can be accomplished. Looming in the foreground is the problem of finance: funds to employ an additional instructor, to purchase needed equipment, to provide the necessary teaching space and other facilities. This article will not furnish information for completely overcoming these financial difficulties, but it will attempt to indicate a way to alleviate and minimize most anticipated problems.

One of the principal problems involved is in employing an instructor. Many junior colleges, especially those in the Southwest, are relatively small and may not be financially able to add a full-time geology instructor to their faculties. Moreover, the demand for geological courses may not be sufficient to warrant a full-time instructor. For this reason the instructor needs to have the necessary qualifications to "fill out" his teaching schedule in some allied discipline. If he has a strong field in

geo-physics, he may be qualified to teach either physics or mathematics. If he has a field of concentration in mineralogy, he may be qualified to teach chemistry. If he has a field of concentration in paleontology, he may be qualified to teach zoology or biology. A geologist who has earned his degree in general geology may possibly have a minor which would qualify him to teach chemistry or physical science. It is not uncommon for a person who received a Bachelor of Science degree in chemistry or zoology or other related sciences to earn a Master of Science degree in geology.

It would be wise to devise a definite plan concerning what the geology instructor would teach for his "fill in" subjects. If an instructor cannot be found with the particular qualifications which the institution requires, some flexibility in scheduling might solve the problem.

Another cardinal problem will be to secure teaching space and laboratory facilities. A geology classroom need be no different from any ordinary classroom and can be worked into the regular schedule quite easily. The laboratory is another matter, however. In the geological laboratory, students must work with maps, rocks, minerals, and fossils. Most of these can be studied at an ordinary desk, but in order to examine maps, students must be

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able to spread them flat on a table. The tables must be of sufficient height to allow students to be seated while working. The size of maps which students will use will range from 18 by 24 inches to approximately 24 by 30 inches. Thus, the tables may either be large enough to seat several students working side by side, or, if available, individual units approximately two feet by three feet and of usual height may be used. One of the advantages of the larger tables is that some maps require a large space to lie flat. However, the smaller units make it possible to demand more individual work from students and are a definite advantage during examinations. The smaller units also could be used more conveniently for their courses. If the college employs a cabinet maker, carpenter, or "handy-man," tables could be constructed on the campus at a minimum expense.

An additional major problem is that of procuring the necessary equipment. The amount of equipment needed will depend largely on three conditions the first of which is the number of courses in geology the institution plans to offer. Ordinarily, the first course should be physical geology, and in the accompanying laboratory, students work with topographic maps, rocks, and minerals. The second course is usually historical geology and use is made of geologic maps and fossils. There will probably be no need or desire to enter into more advanced geology courses on the junior college level, but mineralogy would usually be the next logical course to offer. A variety of minerals would be required for laboratory purposes in the mineralogy course.

In some institutions there has been a marked trend to offer what is termed

"general geology." This course may or may not be accompanied by a laboratory, but if it is, it will not be as complex as that which accompanies the physical geology course since it is designed to afford non-science majors an appreciation of their physical environment.

Examination within the classroom and storage of the rocks, minerals, and fossils must be considered. A satisfactory way to store these items is in a cabinet with removable drawers which may be taken to the students' desks for individual study. At some institutions it is the practice to have large drawers which may be distributed around the room. Students may then take two or more mineral specimens to their desks for examination and exchange them for others when they have finished. Another method is to provide individual study trays, each with a complete set of study specimens. This entails additional expenditure, but it is more satisfactory for the encouragement of individual study.

The second condition affecting the equipment needed concerns the anticipated enrollment. The number of students will of course influence the quantities of materials needed.

The third factor to be considered is the instructor. Teaching methods vary in geology, and the instructor's opinions and techniques will affect the materials and supplies. Laboratory manuals vary widely as to equipment needed and the manual selected will definitely help to determine the materials necessary for the course. For this reason, it would be wise to allow the instructor freedom in selecting materials and quantities, at least insofar as his plans would fit within the intended budget and physical facilities.

A Teacher Looks at Accreditation: Schools in California

JOHN B. PALMER

ACCREDITATION OF colleges and universities began in a somewhat inauspicious manner when in 1851 the University of Michigan undertook to look into the curriculums of the high schools within the state to determine if the students there were receiving a background necessary for further training at the university level. Since that time the United States has been divided into various areas of collegiate representation, and a variety of approaches is used for the accreditation of schools.

In 1953 the Western College Association agreed to participate in the accreditation of California junior colleges in connection with the California Junior College Association and the California State Department of Education. The CJCA was to appoint three members, two from the WCA and one from the State Department of Education to serve as the Commission for Accrediting Junior Colleges.

The committee, or team as it is sometimes called, is chosen well in advance of the date of appearance on a particular campus, and each member has an opportunity to read the application for accreditation which is filed with the Commission

for Accrediting Junior Colleges. This application comes directly from the school seeking accreditation and presents a view of the institution, the community, aims and purposes of the college, curriculum, instruction, student personnel, administration and a statement from the governing board. It is worth noting that this committee is also composed of three junior college administrators, one of whom is chairman, chosen by CJCA, two representatives chosen by WCA, one from the State Department of Education. In short, the visiting committee has the same representation as does the Commission which receives its report.

A kit of accreditation materials, prepared by the Commission for Accrediting Junior Colleges, suggests the above listed areas for consideration. When the application is received, each team member is given a copy of it, and also a copy of the Suggested Outline for Reporting a Visit of a Junior College Accreditation Team. The latter furnishes him with three assignments: 1. recommendation of no accreditation, or accreditation for one, two, three, four or five years; 2. a summary or other confidential statements the committee may wish to pass on to the Commission as a supplemental report; 3. names and signatures of the members of the visiting committee. The kit indicates that the

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WCA Executive Committee is to assign the year a junior college is to be visited, and the chairman of the Commission for Accrediting Junior Colleges, which is composed of junior college representatives, arranges for the visit.

After the accrediting committee makes its visit, a report is filed with the Commission and the WCA. The report is the recommendation on which the WCA bases its findings, and herein lies an apparent weakness of accreditation for junior colleges in California in that the junior college administrators, who comprise half of the accrediting committee, are accrediting their own schools, with the WCA merely accepting the committee recommendations.

It is hoped that one of the results of the committee visit will be self-evaluation on the part of the institution thus visited to determine how much improvement the college shows. Succeeding committee visits use the previous recommendations as a basis for their own judgment.

At this point it might be well to consider faculty participation in the preparation of the application. Many administrators bemoan the lack of interest on the part of the faculty whenever accreditation is discussed; others give out assignments to every faculty member with the belief that this will build character and will immeasurably increase the interest of the faculty in accreditation processes; still others assign the duties only to those who appear to be willing to take them.

Generally, however, most administrators agree that the teaching load prevents adequate participation and indicate that faculty members react as if administrators were trying to unload administrative work on them. Others believe that if every ad-

ministrator and every faculty member were participants in the preparation of an accreditation application, the school would receive better accreditation, or at least a greater number of years of accreditation. Of course, if this were true, then the mere participation of both faculty and administration would be enough without team visitation because the same end would be accomplished through the study of the goals of the college and the application for accreditation and the visit could be eliminated. A letter to WCA stating this fact might be sufficient instead.

To turn from the preparation of the application to membership on the accreditation committees, it will be recalled that the junior college members are chosen by the CJCA, which is an administrative organization, but on occasion one or two administrators will take the floor to argue for teacher participation on accreditation teams. The feeling that classroom faculty members should be on accreditation teams is quite general among administrators providing "fully qualified, competent teachers can be found." This brings to attention a fact overlooked by the administration: A better balanced committee would result from the use of teachers because an administratively dominated committee tends to hold to the *status quo* instead of looking for ways to improve the general area of junior college educational provisions. Another point is that in discussing their faculties administrators praise the sterling qualities of every member of their teaching staff, for not to do so would be tacit admission that they had failed as administrators in securing adequate personnel. When a teacher is dismissed, even if he were incompetent to

begin with, many administrators will not accept the onus of bad judgment.

But to recommend that a top-notch teacher be placed on an accreditation committee is another consideration. A person who holds an administrative position is not necessarily imbued with extra-sensory perception, or even insight, but he is eligible for the accreditation committee. An occasional administrator may even be so forthright as to recommend one or more trustworthy teachers for membership on the committee, but frequently the idea is forgotten before it can be put into action.

A criticism of the standard accreditation procedure frequently heard is that too much emphasis is placed on administrative routine and not enough on the instructional program of the college. This has a double-barrelled effect in that the administrative part of accreditation is what really counts since the team is administratively dominated—witness the control of the chairmanship. Also, if teachers were included, a revision of the standard approach to accreditation would become necessary.

Whenever a team is sent to a college, one of the three junior college representatives is often new to the work, which means that he must be oriented to administrative problems and perspective. The result is naturally self-defeating. If the faculty is the college, or to say it another way, if the instructional program is the heart and life of the college, quoting from the accreditation kit, the preparation of a faculty member should require little more than understanding the structure and function of the committee and of each member's role, since it should be assumed that the teacher would spend a

considerable portion or all of his time visiting classrooms and investigating other faculty dominated areas, especially that of contacting as many faculty members as he might be able to reach in the two days' time.

One of the apparent shortcomings of an accreditation visit is the inconsistency in evaluating a college as fulfilling its objectives, aims and purposes. Six individuals on any one team work as a committee and have a general area of agreement concerning the particular school visited. As they acquire experience it would be assumed that consistency would begin to be apparent since each previous service would be instructive, but to date this is not necessarily the case, for a team will view a school with one set of criteria even as another team on the same campus will possibly use another.

The need for consistency does not imply that all schools should become alike, but there are areas in which some of the conditions created by differences could be ameliorated, and some of these would benefit not only the public junior colleges in California but other colleges and universities as well. One of these possible areas of similarity could be in a uniform course numbering system. Another could be the elimination of extension courses by four-year colleges and universities in the lower division fields where junior colleges can operate more efficiently. The CJCA is in an admirable position to undertake the study for such a suggestion.

The addition of a teacher as a regular member of an accrediting committee does not mean that conditions would be more nearly equal, nor should they be. Schools, students, and community, all differ from each other, but the handling of students

in the classroom, the subject material covered, and the results expected should still be on the collegiate level, and the teacher is best able to determine this. If the administrator is expected to be an expert in the field of finance, school law, budgets, should not the teacher be an expert in the field of the classroom and its technique? Does the administrator, in a visit to a classroom once a year, become an expert in the field of teaching? It is noted that only a very small percentage of administrators actually make a periodic visit to a classroom. Or to take another view, does the teacher who visits an administrator 20 minutes a year become an expert on administration? The answer that many administrators were once teachers does not suffice when one looks to see how long past this experience took place. Conditions of teaching in the classroom are not static, but if they were, teaching by rote might still be fashionable.

Some administrators hold that the faculty should have no part in the creation of a school philosophy. This, however, is shortsighted in view of the fact that the philosophy of the school is put into effect in the classroom since the purpose of the college is to educate.

The philosophy of a school is paramount. Regardless of how modern the buildings, how well paid the administrators and teachers, or how many students are enrolled, if the philosophy does not imbue the faculty and students with what are held to be the valuable assets of a citizenry—a democratic viewpoint, belief in the dignity and worth of man, and the ability to formulate goals and values for one's life—then the school is failing its true role in the classroom. If the teacher on the committee is able to devote his

time during the two-day visit to the classrooms, the teachers and their views, he can undeniably aid the committee in its work.

The belief that teachers are interested solely in teaching and not in administrative duties is taking an ostrich-like view. When it is necessary to require pseudo-administrative work from the faculty, such as roll taking, signing permit slips, handling library notices, and so on, little thought is given to the teacher who wants to teach. Perhaps the teacher has never been approached on the point of looking into administrative duties. Many teachers prefer the classroom to administration, not because of the quiet, cloistered atmosphere but because in the classroom the creative work of the college occurs. It is where education begins and the student comes to understand what is expected of him then and in the future. But simply to deny the teacher a place on the accreditation team because he does not have any connection with administrative duties is to imply that there is no real need for the educational process of the college and that the teacher is not qualified to determine what is and what is not good educational practice. There are many good teachers who are ready to be chosen to serve on accreditation teams, and they are not, nor do they need to be, master teachers.

To stipulate that only master teachers would be qualified would unbalance the committee to the extent that its report might well be totally unacceptable. A master teacher, having qualifications not possessed by other members of the committee, might carry such weight that his views would prevail. There is no doubt that a master teacher would be highly desirable in that he would be conversant with most of the best methods of teaching,

of student views, and of anticipated results, but the committee would lack that certain leavening process which is necessary to success. If administrators were chosen on the same basis, it might cast considerable doubt on the possibility of accreditation, all things being equal, for any shortcomings not properly recognized, especially on a second visit, could cause havoc. The team so composed might find it extremely difficult to view the problems of any given school objectively and at the same time recognize that there were conditions which required understanding only and were not to be judged strictly in the light of rules and regulations. Therefore, it would not be logical to require one person on the committee to have requisites not needed by the others.

A junior college teacher frequently is an expert in a single field, or occasionally in related areas, but above all if he is truly interested in teaching he can well determine what is being done in the classroom and whether or not it is being done well. Some administrators admit privately and within their own meetings that an accreditation team is met with a "snow job." Thus one feels some justification when faculty members fail to take interest in the visit. "Just a back scratching routine" is not an infrequent remark heard among faculty members. A bitter complaint voiced many times is that no member of a team visits any classes at all, which leads to the conclusion that an administrator's criticism that there is not enough attention given to the instructional part of the college is justified; that administrators on teams are viewing the forthcoming accreditation of their own campus and do not probe too deeply, even if the two days permit it.

The inclusion of teachers on accreditation teams would create an emphasis on instruction which, if the statements of administrators can be taken at face value, is not yet noticeable. If each campus visited knew that the accrediting team had a faculty member who was a full-time classroom teacher, the college would likely prepare itself in the light of that fact.

That the faculty and administration should discuss fully any problems prior to a visitation is akin to the housewife's cleaning house furiously before a visit from the neighbors. This does not mean that the faculty and administration should not discuss the forthcoming visitation, but to do so with the thought in mind that there would be fewer points of difference raised before the committee is not the real purpose of the visit. If there is something to be said that will clear the air and it can be done only before an outsider, then it should be that way. One of the major assets of a democratic society is that differences of opinion are met and aired as they arise. The purpose of an accreditation team's visit is to determine if the school is meeting its objectives, and one of these objectives should be the outlook of the faculty. An administrator listening to a teacher discuss his common problems does not receive the same view that a faculty member of the team would have. It is understandable that a teacher would tend to speak more freely with another teacher since both have common problems, and by this reference it is meant that the teacher would be from a junior college. It is true that the WCA will send to represent it a classroom teacher, but most commonly the person is a department head or someone from the upper division where conditions are different from those in the

lower division, which is what the junior college represents on the university level.

From the study of the accreditation kit it appears that there is no single part of the college which is elevated above another, but in the final analysis it is the finished product, the student, that counts, and unless more emphasis is placed on instruction and more teachers are used on teams, the junior colleges in California will miss the challenge given to them. It might well be considered that additional members to the accreditation teams could come from the junior colleges. Since, in California, junior colleges are community colleges with transfer and terminal (two-year) courses the inclusion of a teacher from the academic division and one to represent the technical and industrial area would balance out the committee with five members. These additional members would be full-time classroom teachers recommended by the faculty to the college; the college in turn would send the teachers' names to the CJCA.

Faculty members of the various colleges throughout the state are becoming more interested in this matter. The Bureau of Junior College Education of the State Department of Education is well aware

of the emphasis that is being placed on the inclusion of faculty members on accreditation teams and that one organization within the state is actively attempting to make this possible. It will serve well the purpose of accreditation to recognize the additional strength which can be brought to the accreditation teams by using faculty members. To include the faculty in all of the planning stage and then to require that same faculty to stand by during the visitation is doing only half the job. A teacher who can plan for a visitation can also make one.

There remains the initial point still unresolved which is that the WCA does not in the true sense evaluate the junior college for accreditation. If the WCA means to do so, the whole committee should be re-evaluated in terms of membership, and perhaps the chairman should be a representative from either the State Department of Education, where the legal responsibility for accreditation lies, or from one of the members from the WCA, since the latter is permitting accreditation in its name. Until some changes are made, accreditation of junior colleges in California will not have any real meaning.

Special Collections in the Junior Colleges

GENE MAGNER

WITH THE assistance of the Research Foundation of the University of the State of New York, the writer sent questionnaires in February, 1960, to 684 junior colleges listed in the January, 1960, issue of the *Junior College Journal* and received 373 replies by June. If follow-ups to the questionnaires had been sent, a greater number of replies would have been received, but the writer did not have an opportunity to make an exhaustive survey.

Several of the early replies were disheartening: "I doubt very much if a junior college library is justified in building a 'special collection.'" "We are, in fact, lucky if we have a large enough budget to keep the backs on the books." "It seems unrealistic to me to expect that any public junior college library is likely to have such. Perhaps you need a clearer definition."

Several of the questionnaires were answered in regard to excellent subject collections, to gatherings of materials relating to the histories of the colleges concerned, and to general collections received as gifts, such as a local citizen's private library. Following are two lists the first of which covers those special collections mentioned in the 373 replies which de-

serve some particular notice. In the case where an individual is in charge of one of these collections, his name is given after the collector's name. Interlibrary loans and microfilms of these collections may be requested unless otherwise noted.

The second group of collections is a brief listing of those which are not currently of a substantial size. In most cases the intention to continue building was indicated.

The results of the survey show that it was not unrealistic to expect to find special collections in the junior colleges. A more thorough survey certainly would unearth others of excellence. Do these collections compare with those to be found in the university libraries? Perhaps not. Yet they are holdings for the use of scholars, gathered through a love to preserve the best elements of knowledge, and the scholars who use them will be grateful.

SPECIAL COLLECTIONS IN THE JUNIOR COLLEGES

C. L. Andrews Collection of Alaskana. Shelton Junior College, Mrs. Carol Markee.

Estimated 2,000 items: books, periodicals, miscellaneous printed materials, letters, photographs, collected by this Alaskan author. Must be used on premises. There is a possibility of duplication being made.

Arizona Collection. Phoenix College, Mrs. Wilma Heisser, Librarian.

200 items. Must be used on premises.

Baptist Collection. Jacksonville College, Mrs. Anna Belle Anderson, Assistant Librarian.

GENE MAGNER is the Librarian of the State University of New York, Morrisville, New York. Formerly he was Curator of the Modern Poetry Collection, Lockwood Memorial Library, University of Buffalo, New York.

Over 500 items: early papers, minutes, books of Baptist Missionary Association of Texas, etc. Must be used on premises. Barry Collection (on the Pacific Northwest). Boise Junior College, Ruth Mc Birney, Librarian.

A quantity of books and manuscripts on Pacific Northwest history and exploration; also several hundred maps, mostly facsimiles or copies of early maps of the region, accumulated by J. Neilson Barry of Portland, Oregon. Microfilms could be made; otherwise, material must be used on premises.

Cummins Room of American Antiquities Collection. Centenary College For Women, Dr. Ernest R. Dalton, Curator.

5,000 items: gems, stones, archaeological specimens (primarily referring to New Jersey Indians); antique furniture, objects d'art. Must be used on premises. This college also holds the *Cummins Book Collection*, under the charge of the librarian, Ruth E. Scarborough. There are 1,500 items in this collection: books on American antiquities, anthropology, geology, American Indians, old furniture, glassware, and pottery; also old maps and documents referring to American and New Jersey history. Interlibrary loans honored for the books of this collection.

Disciples of Christ Collection. Midway Junior College, Francis A. Cook, Librarian.

1,500 items: books and periodicals referring to this church's history, etc.

James B. Dixon Bird Egg and Nest Collection. Palomar College, Mrs. Esther W. Nesbin, Librarian.

260 of the nests and eggs of the 273 birds native to California. Must be used on premises.

Drama Collection. Bennett College, Richard Shaw, Librarian.

1,500 volumes devoted to the drama, its history and criticism.

Dwinelle Library. Santa Rosa Junior College, Marian Whitnery, Instructor in History.

700 items: California, with special stress on Sonoma County. Some items must be used on premises.

Early Catholic Americana Collection. St.

Thomas Preparatory Seminary, Rev. Theophil T. Mierzynski, Librarian.

150 items: U. S. imprints to 1850. Must be used on premises unless microfilming could be arranged.

Finnish American Historical Archives Collection. Suomi College, Dr. Armas K. E. Holmio.

5,200 items: material dealing with history of the Finns in America. This college also has a Finnish Library Collection of 3,500 Finnish works on religion, folklore, literature, plus a number of doctoral dissertations made at the University of Helsinki. Mrs. Aulis Konttinen is in charge of this second collection.

First Editions of Distinguished American Women Writers Collection. Pine Manor Junior College, Helen Paragamian, Librarian.

302 volumes; no additions made in many years.

Floriculture Collection. Ambler Junior College, Joseph Yenish, Librarian.

200 items; rare books, including incunabula; must be used on premises.

Forsythe Collection. Lincoln College, Mrs. William J. Stigall, Jr., Librarian.

Several hundred items to be cataloged: books printed 1502-1699—English, French and Italian drama; also notes, manuscripts and galleyes from Robert Stanley Forsythe's own lecturing and publishing, plus early college notes.

Fossum Foundation Library Collection. North Dakota School of Forestry, George P. Hynes, Librarian.

600 volumes and thousands of papers: the contents of noted horticulturists, Truman Fossum's Library.

Geoffrey of Monmouth Collection. Bellarmine College, Rev. James J. Greer, S. J., Librarian.

200 items: works and microfilms dealing with Geoffrey of Monmouth. This collection has been used by outside scholars on several occasions.

Georgia Collection. Georgia Southwestern College. Macy Bishop Gray, Librarian.

200 items. Some items restricted to use on premises.

Hawaiian Collection. Maunaolu College.

550 items: books, pamphlets, etc. on all subjects relating to Hawaii.

Joseph F. Honecker Collection (of ornithology). College of St. Gertrude, Sister M. Alfred, Vice President.

75 books plus several hundred bird paintings, birds' eggs and nests; photostats may be arranged for; otherwise, must be used on premises.

Howell Memorial Collection. Weber College, Wilma Grose, Librarian.

10,000 items: volumes primarily including English and American novelists up to 1900; also early poets and dramatists. Must be used on premises unless arrangements for microfilming could be made.

Indian Collection. Bacone College, Mrs. Leta S. Dover, Librarian.

1,800 items: books, periodicals, manuscripts on the many tribes represented in the college's registration. Some items must be used on premises.

Johnson Collection. The Kemper School, Rev. S. E. West, President.

Approximately 300 rare volumes originally owned by F. T. Kemper and Col. T. A. Johnson. Collection not yet available; contents are undetermined.

Kansas Collection. Fort Scott High School and Junior College, Mrs. Lucile Rogers, Librarian.

275 items. Must be used on premises.

Kansas Collection. Pratt Junior College, Jean Bailey Head, Librarian.

400 books plus hundreds of pamphlets and clippings relating to all phases of Kansas. Must be used on premises.

Kentuckiana Collection. Midway Junior College, Francis A. Cook, Librarian.

326 items: books by Kentucky authors and books relating to Kentucky history, literature, genealogy.

John D. Lee Collection (of Western U. S. history). Dixie College, Elizabeth S. Beckstrom, Librarian.

250 items: Many early editions, journals, diaries and other source materials.

Lincoln Collection. Lincoln College, Mrs. William J. Stigall, Jr., Librarian.

Several hundred items in the process of being cataloged: books, pamphlets, magazines, documents, manuscripts, letters, pic-

tures, sculpture by and about Abraham Lincoln; included are books from his law library, deed and note to a property owned in Lincoln, etc. Must be used on premises.

Lutheran Church—Missouri Synod Collection. Concordia Junior College, Professor Otto R. Spurgat.

1,500 items: all books and periodicals published by this church.

Maine Women Writers' Collection. Westbrook Junior College, Grace A. Dow, Curator.

400 items: first editions, manuscripts and letters of such writers as Mary Ellen Chase, Elizabeth Coatsworth, Gladys Hasty Carroll and Elizabeth Akers Allen.

Maryland Collection. St. Mary's Seminary Junior College, Priscilla Pedragosa, Librarian.

307 items. Must be used on premises.

Minnesota History (Northwest Territory). Independent School District No. 697, Marie Bezold, Librarian.

Over 150 items.

Mormon Doctrine. Church College of Hawaii, Kenneth T. Slack, Librarian.

2,400 items. Attempt here is to make a collection as complete as possible.

New Church, Swedenborgian Collection. Urbana Junior College, Robert Auerbach, Librarian.

2,500 items: All of the standard works of Emmanuel Swedenborg in English, Latin and German; photolithographic copies of the original Latin manuscripts; many 19th century editions; some scarce volumes.

Northwest Collection. College of St. Gertrude, Sister M. Alfred, Vice President.

100 books plus many manuscripts and letters. Arrangements may be made for photostats; otherwise, must be used on premises.

Oklahoma and Seminole Indian Local History Collection. Seminole Junior College, Miss Willa Mae Townes, Librarian.

500 items: pictures, manuscripts, theses, books, Seminole Indian artifacts.

Orange County (California) Authors. Santa Ana College, Ruth Bradley, Librarian.

156 items: books and manuscripts. Manuscripts must be used on premises.

Pentecostal Alcove Collection. Southwestern Bible Institute, Librarian.

1,000 items: books, etc. concerning Pentecostal movement.

Pentecostal Holiness Collection. Emmanuel College Library, Dorothy Poteat, Librarian.

An almost complete collection of the publications of the Pentecostal Holiness Church. Must be used on premises.

John Phelan Library. Campion College, John LePine, Librarian.

850 items: rare first editions of Keats, Shelley, etc.; key works in English literature 1920 to early 1940's; especially rich in early and middle English, Anglo-Norse, etc. Persian Collection. Pine Manor Junior College, Helen Paragamian, Librarian.

40 items; books and manuscripts relating to Persian history, art, etc.

R. S. Reading Collection of Indian Artifacts. Navarro Junior College, R. S. Reading.

445 cases $8\frac{1}{2}'' \times 16''$. This collection is owned by R. S. Reading, author of *From the Six Corners of Texas*. Must be used on the premises.

Scandinavian Collection. Grand View College, Mrs. Barbara Bell, Librarian.

3,000 items: Scandinavian works, mainly Danish, in literature, history, biography, religion; most of the publications of Soren Kierkegaard and N.F.S. Grundtvig, including all published translations of Kierkegaard.

O. P. Silliman Memorial Library of Ornithology and Natural History. Hartwell College, Luella Wiens, Librarian.

Over 3,000 items: books, periodicals, serials, documents; many early and first editions; collection quite complete to 1945. Must be used on premises.

Swedish Books and Bibles. Luther Junior College, Mrs. Irene Fenstermacher, Librarian. 200 items: Bibles, old, are in English and Swedish. Swedish books in almost every classification. Anyone interested in acquiring this collection might contact the librarian.

Treasure Room Collection of Rare Books and Fine Printing. Los Angeles City College, T. Francis Smith, Librarian.

251 items: manuscripts, incunabula, 16th

century book illustrations, 16th and 17th century maps, etc.

SPECIAL COLLECTIONS IN PROGRESS IN THE JUNIOR COLLEGES

Americana Collection. Orange County Community College.

Apparition of La Salette Collection. La Salette Seminary, J. F. Solomita, Librarian.

F. P. Baker Collection of Civil War History. Eastern Oklahoma A. & M. College, Thelma M. Gunning, Librarian.

Central New York State Collection. State University of New York—Morrisville, Gene Magner, Librarian.

(First Editions of American Poets) Wingate College, Ethel K. Smith.

Florida Collection. Chipola Junior College.

Florida Collection. St. John's River Junior College, Mrs. Norma M. Ribinson, Librarian. (Georgia Collection.) Gordon Military College, Mrs. J. H. Jackson, Librarian.

Kentucky Collection. Paducah Junior College, Fay Champion, Librarian.

Methodist Collection. Wood Junior College, Mrs. Edward Lloyd, Librarian.

Mississippi Collection. Wood Junior College, Mrs. Edward Lloyd, Librarian.

Mississippi Room Collection. East Mississippi Junior College, Hallie Loomis, Curator.

(New York State Collection.) Mohawk Valley Technical Institute. Mrs. Alice B. Griffith, Librarian.

(North Carolina Collection.) Wilmington College, Mildred H. Dorsey, Librarian.

(Oklahoma and Indian Collection.) Cameron State Agricultural College, Odeal Locke, Librarian.

Orange County (N.Y.) Collection. Orange County Community College.

Rare Books Collection. Norman College, Mrs. Mary Joines Durham, Librarian.

Royal Memorial Collection (of English Literature and North Caroliniana) Pineland Junior College, Mrs. Janet A. Davis, Librarian.

Southwestern Collection. Odessa College, Mrs. Madeline W. Berry, Librarian.

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This I Tried and Found Helpful

Improving the Spelling of Students in Remedial English

Kenneth Thompson, Bakersfield College, Bakersfield, California

ONE OF THE remedial English teacher's major tasks is to teach his students how to spell without allowing spelling to consume the major portion of class time. Since many problems in spelling are related to students' inability to spell certain sounds phonetically, the students need extensive practice in dictation. However, limitations on class time do not always permit such extensive dictation to be given. Often the student is unable to practice spelling words phonetically outside the classroom.

One solution to this problem has been the provision of recorded dictation in a listening laboratory which the students can use as often as they wish between 8 A.M. and 10 P.M. on regular school days. Each tape consists of a few instructions and examples of how a certain sound is spelled or how a certain rule may be applied and sentences which require the students to apply the instructions for spelling the sound or for using the rule. The papers which the students leave after taking the sentences down provide the instructor with material for a diagnosis of

their specific spelling strengths and weaknesses as well as give evidence of the quality of the students' preparation for class work.

Since many students are aware that they cannot spell but are not sure what their weaknesses in spelling are, it is important that a careful analysis of the types of spelling deficiency be made early in the course. Such analysis enables the students themselves to have a more realistic view of their spelling problems and provides them with immediate goals. An additional source of motivation can be provided by having the students themselves make analysis of their tests and keep charts indicating their progress in mastering their deficiencies.

Student response to both the tape recordings and the analysis of their papers has been good. The number of tests taken in the listening laboratory and the carefully filled out progress charts provide evidence of considerable effort toward improvement in spelling, which is reflected in class work.



Recent Writings... **JUDGING THE NEW BOOKS**

University Adult Education: A Guide to Policy, by Renee and William Petersen (288 pp.; Harper & Brothers, 1960, \$5.50).

Although this stinging book concentrates its barbs on the university's role in adult education, it may be read with great profit by adult educators who labor in the more mundane institutions, such as the junior college, and who have the wits to avoid the mistakes that abound in the university.

That there are mistakes is the extremely subjective point of view of the Petersens who have surveyed extensively at least 50 adult education leaders throughout the country and have combed the literature to produce no less than a 34-page bibliography. Each page's footnotes alone testify to the authors' diligence in tracking down just the precise quotations from other authors to make the Petersens' points.

The first chapter on "The Significance of Adult Education Today" is a challenging primer filled with the facts and figures which point to the unarguable need for life-long learning.

The second chapter on "Principles and Problems" neatly outlines the traditional and the psychological schools of adult

education today, how programs are formed, determination of content and method, and evaluation techniques. The Petersens are far from happy with the typical adult educator, poor fool, who, for example, tries to determine what his prospective customers want to learn before setting out his wares.

"Why do some educators refuse to accept their professional responsibility?" lament the Petersens. "The most obvious reason is the notion that this makes their task easier." The authors then call up a host of other writers who also bemoan this way of doing business.

The "General Principles" chapter decries "the low level of university adult education." According to the Petersens, "In sum, we must distinguish both between worthless and worthwhile activities and between the broad genus constituting the second group and, within it, that smaller species appropriate to a university . . . In screening adult education programs, the university ought to use a fine mesh . . . It is true that students in extension differ in some respects from their regular-session counterparts, but there are no intrinsic reasons excusing systematically lower standards."

The "Policy" chapter includes several

helpful guide-lines for determining credit versus non-credit courses, conferences ("The university . . . should make sure that its facilities are not being used as a cheaper and more convenient substitute for a hotel"), methods and technical facilities, and community services.

The university comes under harshest attack for what the Petersens call "university noneducation for adults." "Community development, as a prime example of university noneducation, has no place on the program of a university . . . is not only *not* college education or research; it is not these on any level . . . There are many other institutions designed and financed to perform these functions."

Adult education or extension is deplored as a subsidized, poor relation to other university divisions and as a shoddy "means of buying good will." "The only way to meet the problem," the Petersens decide safely, "is to view adult education within the context of an educational institution, and not a commercial venture, a social gathering, or a general means for being good, and to bring it meaningfully within the university's organization."

In recapitulation, the Petersens take a dim view of adult education which they describe colorfully as "at best a poorly charted sea, (where) the creative challenge of unexplored areas has induced many a captain of extension to sail his ship on the reef of triviality and sloth, where its standards break up one by one and the vessel finally sinks into the murky depths of commercialism."

However, they believe that "a university, if it has or can acquire the necessary facilities, faculty and other resources, should engage in adult education" but only if the university can rigorously define

its distinctive place, set a limit to the tasks it will undertake and an order of priority among them. All of this is to be done on a college-level ". . . the standard maintained in the traditional academic disciplines of the day campus, or in programs of comparable or greater difficulty and complexity."

The university conducts about four per cent of all adult education in this country. Evidently, to the Petersens, even this is too much.

The junior college administrator for this purpose may easily put himself in the position of the university administrator of adult education and may well accept the flagellation and goading of the Petersens along the road toward higher standards in educating adults.

HENRY KLEIN

Harcum Junior College

Bryn Mawr, Pennsylvania

Basic Philosophies of Education, by Christopher O. Weber (333 pp.; Rinehart).

Perhaps it is not an unhappy commentary that in these times of educational protest, the voice of passion concerning education's purpose and destination is being forced to bow before the mature voice of scholarship and orderly academic deliberation. If one is searching for a scholarly guidebook to the vast terrain of modern education, he will find this work sharp, decisive, and clear. Both scholars and laymen who complain that education has grown haphazardly and without fundamental adjustment to the new and extravagant forces of these times will do well to review this philosophical thesis.

The author outlines the historical development of educational philosophies, revealing how the oldest and the most recent philosophies find their advocates

in modern education. With abundant insight he shows how each major philosophy may act as check and balance on a conflicting one to create in democratic society a liberal philosophy of education, one, as he points out, "worthy of a free man.

The book is divided in five parts, in each of which the author discusses what he believes to be the major philosophies that have served as a foundation for education. The first part concerns the Christian religion and its long range effect on the evolution of education from church to state.

Next he deals with essentialism and traditionalism movements which were rooted in Christian ideology and which evolved logically in education. These philosophies contend that there are a few essential studies of discipline which should form the basic or essential curriculum for all students. This old doctrine had its spokesmen in antiquity in Aristotle and Saint Thomas and is well represented today by Robert M. Hutchins, Mortimer J. Adler, and others.

Idealistic philosophy follows naturally on the heels of the preceding topic. It, too, is indebted to Christian ideology for some of its basic tenets. In idealism, as in Christianity, the self is made significant and precious. And idealism, like religion, moves away from the particular to the general—to things vastly significant whether provable by limited empirical methods or not. The major figures in idealism are Plato, Kant, and Hegel, and it has extended today to the eminent American educators, W. T. Harris, H. H. Horne, and to the Italian, G. Gentile. Each man's philosophy is dealt with ex-

tensively; however, special attention is accorded Hegel because of the profound influence he has had on the philosophy of this century.

The fourth section is devoted to realistic philosophy and education. Realism has to do with what actually exists. It allies itself with so-called common sense views. It recognizes the existence of a universe, of a realm outside that known to the sense perceptions. This philosophy has its counterparts in literature, art, and music.

The final unit is concerned primarily with the pragmatic philosophy of John Dewey. The instrumentalism of Professor Dewey states that the truth of any judgment or idea is tested by its success when applied to practical life situations.

Early in this century, as the author relates, many educators recognizing the inherent weaknesses and dangers in this new world, formed ranks to do battle, but they were inundated by the progressive tide. The results of mass application of modern education are evident. One cannot take out discipline and inject psychological "chit-chat" in an effort to cover up the deficiency.

In today's world a philosophy that is amalgamated with common sense may be pitifully inadequate. It takes uncommon sense to grasp the vastness of the universe, to grasp things unseen, unheard, unfelt. Uncommon sense is demanded of us as a nation to deal with our many and acute problems in this rootless age. We are no longer living in Dewey's world of ordinary "practical life situations." Are we?

Luis M. Morton, Jr.
Odessa College
Odessa, Texas

Junior College Growth

EDMUND J. GLEAZER, JR.

LAST NOVEMBER the President's Commission on National Goals made its report to President Eisenhower and the American people. Among the "important things that should be done," the Commission reported, is that "two-year colleges should be within commuting distance of most high school graduates." Also of national interest at about the same time was the conference held on the Two-Year College sponsored jointly by the Center for the Study of Higher Education and the American Association of Junior Colleges, December 5-6, 1960, at Berkeley, California. This first national conference of leaders in education, government, labor, business, and industry evidenced some differences of opinion in regard to the exact role of junior or community colleges and of the most appropriate form of organization and financial support. However, it was the strong consensus of the group that junior and community colleges must provide educational opportunities for a substantially increased proportion of

college education in the years ahead. These two expressions on the national level have their counterparts in the states with movement under way in almost all of the states, and particularly in those with rapidly increasing population, to either extend present junior college facilities and services or enact legislation for their initiation and support.

Of special significance as indicators of what the future might expect of the two-year institutions are the Master Plan for Higher Education in California and the report to the Governor of New York and the Board of Regents by the "Heald Committee" which reviewed New York State's needs and resources in higher education. The California Master Plan provides for a "tri-partite" system of higher education in that state, a partnership of junior colleges, state colleges, and the university. Each type of institution is to direct its attention to purposes and programs appropriate to its *raison d'être*. Under the plan the junior colleges will be expected to

TABLE V
*Number of Junior Colleges and Enrollments
1900-1960*

School Year	Number of Colleges	Enrollment
1900-1901	8	100
1915-1916	74	2,363
1921-1922	207	16,031
1925-1926	325	35,630
1926-1927	408	50,529

1927-1928	405	54,438
1928-1929	429	67,627
1929-1930	436	74,088
1930-1931	469	97,631
1931-1932	493	96,555
1932-1933	514	103,530
1933-1934	521	107,807
1934-1935	518	122,311
1935-1936	528	129,106
1936-1937	553	136,623
1937-1938	556	155,588
1938-1939	575	196,710
1939-1940	610	236,162
1940-1941	627	267,406
1941-1942	624	314,349
1942-1943	586	325,151
1943-1944	584	249,788
1944-1945	591	251,290
1945-1946	648	295,475
1946-1947	663	455,048
1947-1948	651	500,536
1948-1949	648	465,815
1949-1950	634	562,786
1950-1951	597	579,475
1951-1952	593	572,193
1952-1953	594	560,732
1953-1954	598	622,864
1954-1955	596	696,321
1955-1956	635	765,551
1956-1957	652	869,720
1957-1958	667	892,642
1958-1959	677	905,062*
1959-1960	663	816,071*

* Cumulative total.

Explanation of Table V

The apparent decrease from 677 to 663 junior colleges is largely a result of change of programs in a number of university extension centers which leaves them no longer essentially two-year colleges. Twenty-six institutions were dropped from this edition of the *Directory* because they no longer can be defined as junior colleges (see Introduction). Nine additional two-year colleges have now become senior institutions. Three California evening junior colleges are no longer separate from their day counterparts. 46,294 students were enrolled the preceding year in the institutions dropped. One institution closed during the year. Twenty-three institutions have been added.

Enrollment for the full academic year 1959-60 including the 1959 summer session was 816,071. This is a cumulative total and includes all students. Reporting institutions were instructed to count each student only once. The "cumulative" total gives some indication of the number of different people served by the college during the entire year. As will be noted in a subsequent table a large part of the decrease in enrollment from 905,062 to 816,071 is accounted for by a decrease in adult enrollments. Table VIII shows a total of 640,527 students enrolled on October 15, 1959. It is important to differentiate between the October 15 count and the cumulative. Justification of the cumulative total is found in the large number of students, adults and special students, who are served by the community-type junior colleges in short-term programs through the year.

TABLE VI
*Number of Junior Colleges
 1900-1960*

Year	Total	Public	Private	Percentage Public
1900-01	8	0	8	0
1915-16	74	19	55	26
1921-22	207	70	137	34
1925-26	325	136	189	42
1929-30	436	178	258	41
1933-34	521	219	302	42
1938-39	575	258	317	45
1947-48	651	328	323	50
1952-53	594	327	267	55
1953-54	598	338	260	57
1954-55	596	336	260	56
1955-56	635	363	272	57
1956-57	652	377	275	57.8
1957-58	667	391	276	58.6
1958-59	677	400	277	59.1
1959-60	663	390	273	58.8

Explanation of Table VI

Table VI shows the growth in the number of institutions, those under the control of public authority, those that are independent or church-related and the percentage of change between the two main types. Listed among the 663 junior colleges are all institutions accredited by state departments of education or by regional accrediting associations as organized two-year colleges, extension centers or teachers colleges where the programs are essentially of the junior college type. Until 1947-48 there were more junior colleges under private auspices than those publicly supported. However, from that time to the present the increase in the number of public institutions has been fairly consistent while the number of church-related and independent junior colleges has remained relatively steady. Decrease from 400 to 390 public junior colleges as indicated in the table is accounted for largely by no longer listing sixteen extension centers of Indiana and Purdue Universities and three junior colleges in the state teachers colleges of Maryland. Decrease in number of privately supported institutions results from those junior colleges which became 4-year colleges.

increase their enrollments from about 100,000 full-time students in 1960 to 300,000 in 1975.

* * *

The tables herein, together with their explanations, compare the present year with past years and give statistics on various current aspects of the junior college.

Tables V through XI follow Tables I through IV of the Junior College Direc-

tory, published in the January 1961 *Journal*.

The New York report indicates that two-year community colleges are an essential and major part of the provision for higher education in that state. Moreover, "the evidence indicates that in the future two-year public institutions must provide collegiate opportunities for a sharply increasing number of young people in this State as elsewhere in the nation." What were described as conservative estimates

TABLE VII
*Junior College Enrollment
 1900-1960*

Year	Total	Public	Private	Percentage Public
1900-01	100	0	100	0
1915-16	2,363	592	1,771	25
1921-22	16,031	8,349	7,682	52
1925-26	35,630	20,145	15,485	57
1929-30	74,088	45,021	29,067	61
1933-34	107,807	74,853	32,954	69
1938-39	196,710	140,545	56,165	71
1947-48	500,536	378,844	121,692	76
1951-52	572,193	495,766	76,427	87
1952-53	560,732	489,563	71,169	87
1953-54	622,864	553,008	69,856	89
1954-55	696,321	618,000	78,321	89
1955-56	765,551	683,129	82,422	89
1956-57	869,720	776,493	93,227	89.2
1957-58	892,642	793,105	99,537	88.8
1958-59	905,062*	806,849	98,213	89.1
1959-60	816,071*	712,224	103,847	87.3

* Cumulative total.

Explanation of Table VII

Table VII shows comparative growth in enrollments of public and private junior colleges. The number of students in the public institutions has exceeded enrollments in the privately controlled colleges since 1921-22, and the difference increased steadily in favor of the public colleges until 1951-52. Since that time the proportion enrolled in the two types of junior colleges has held fairly constant. In fact, this year the removal of publicly supported institutions formerly listed in the *Directory* and a decrease in adult students enrolled resulted in an apparent enrollment drop in the public junior colleges while at the same time the private institutions registered an increase from 98,213 to 103,847 students.

A factor to be considered in interpreting the significance of these data is the predominant residential character of the private institutions as compared with the commuting student body of the majority of public institutions. The public junior colleges have many more part-time and adult students enrolled than do the private junior colleges.

by the Committee place the total two-year community college requirements in New York State at: 40,000 to 50,000 full-time students within five years (the fall 1959 number was 16,000); 75,000 to 100,000 full-time students within ten to fifteen years; 100,000 to 125,000 full-time students within fifteen to twenty years. New York is also served by a large number of privately supported junior colleges.

In many other states developments have

been notable; establishment of the Massachusetts Board for Regional Community Colleges and organization of the first institutions under that Board; the continuing dramatic growth of the junior college system in Florida; legislative studies in Pennsylvania and Ohio; Higher Education Commission reports for strengthening the junior college in Kansas, Missouri, Iowa, and Washington. These mentioned are only a sample of a period of most un-

TABLE VIII
*Distribution of Enrollments
 1936-37 to 1959-60*

Year	Freshmen	Sophomores	Others	Total
1936-37	73,880	41,993	20,750	136,623
1937-38	80,398	41,986	33,204	155,588
1938-39	96,687	47,174	52,849	196,710
1939-40	105,663	57,128	73,371	236,162
1940-41	104,819	60,218	102,369	267,406
1941-42	100,280	55,644	158,425	314,349
1942-43	90,810	40,981	193,360	325,151
1943-44	62,307	25,690	161,791	249,788
1944-45	117,836	36,537	140,102	251,290
1945-46	116,282	35,948	142,245	294,475
1946-47	210,805	67,406	176,837	455,048
1947-48	196,510	119,080	184,946	500,536
1948-49	172,537	100,323	192,955	465,815
1949-50	183,117	102,871	276,798	562,786
1950-51	164,523	93,622	321,330	579,475
1951-52	139,850	70,976	361,367	572,193
1952-53	156,192	70,065	334,475	560,732
1953-54	172,566	83,138	367,160	622,864
1954-55	190,634	85,802	419,885	696,321
1955-56	255,301	124,934	385,361	765,551
1956-57	291,981	136,530	441,209	869,720
1957-58	330,956	158,491	403,195	892,642
1958-59	303,507	144,873	230,886	679,266
			(456,682†)	(905,062†)
1959-60*	346,568	163,674	130,285	640,527
			(305,829†)	(816,071†)

* Data on enrollments given as of October 15, 1959.

† Cumulative total.

Explanation of Table VIII

Table VIII shows freshman and sophomore enrollments as compared with "others." Under the latter caption are included special and adult students. Until some national agreements can be reached on definitions to be used in reporting adult and special students these figures will not be of great significance. Incidentally there is similar need to make reporting more precise of all college enrollments including freshman and sophomore students. Two figures appear in the last two columns. One of these is cumulative (the larger one). As indicated previously this is a head count of all students enrolled during the year but without any student being counted twice. The figure is useful in giving an estimate of the number of different people served by the institutions during the year. The smaller figures (130,285 in one column and 640,527 in the other) represent the number of students enrolled October 15, 1959.

Two factors appreciably affect the apparent decrease in enrollment of "other" students. The institutions listed last year but not this year had substantial programs for adults and special students (20,171 students). These were not counted this year. Reports coming from California institutions give a total of 56,892 adult and special students which last year they reported 132,095. The difference of 75,203 plus 20,171 students in institutions no longer listed comes close to accounting for the decrease from 230,886 adult and special students in October 1958 to 130,285 in October 1959. There is some reason for inferring that the decrease in California enrollment is due largely to policy changes in classification of students.

usual activity in the junior college field. Pressures in our environment are forcing society to find effective ways of maintaining opportunities for higher education.

The junior college is recognized as one of the important agencies in this process. An accelerating rate of growth can be expected.

TABLE IX
*Distribution of Size of Enrollment
(as of October 15, 1959)*

Enrollment	Public	Private	Total
1-49	12	26	38
50-99	20	42	62
100-199	37	62	99
200-299	39	52	91
300-399	30	27	57
400-499	28	18	46
500-599	25	16	41
600-699	20	3	23
700-799	15	1	16
800-899	13	6	19
900-999	16	2	18
1000-1999	51	15	66
2000-2999	23	2	25
3000-3999	17	1	18
4000-4999	5	...	5
5000-5999	8	...	8
6000-6999	4	...	4
7000-7999	4	...	4
8000-8999	2	...	2
Over 9000	8	...	8
Total	377*	273	650*

* The 13 junior colleges that began operation in 1960 are not included in this figure.

Explanation of Table IX

Distribution of enrollments with respect to size of the public and private colleges can be observed in Table IX. As can be readily noted, the public institutions are typically much larger than privately sponsored ones. Some of the small private institutions are operated by religious orders and might be described as single purpose junior colleges, e.g., preparation for teaching in church schools or other church responsibilities. Generally speaking, the public junior colleges will have a larger proportion of adult and part-time students enrolled. One hundred forty-two institutions have enrollments of 1000 or more. Twenty-six have more than 5000 students.

TABLE X

Among the private and church-related junior colleges the breakdown is as follows:

Independent, non-profit	87
Branches of privately controlled colleges or universities	4
Baptist Colleges	28
Roman Catholic Colleges	60
Lutheran Colleges	15
Methodist Colleges	24
Presbyterian Colleges	9
Proprietary Colleges	4
Others*	42
Total	273

* These represent 17 denominational bodies and the YMCA.

Explanation of Table X

TYPES OF JUNIOR COLLEGES

Public or tax supported junior colleges now number 390, while the privately controlled or church-related institutions total 273. Table X shows the distribution of control among the non-tax supported junior colleges.

The co-educational junior college is the prevailing type with a total of 548 institutions. There are 71 junior colleges for women and 44 for men. Generally, in co-educational public junior colleges, men outnumber women by more than two to one.

TABLE XI
Regional Accreditation

	Public		Private		Total No. of Colleges	Percentage Regionally Accredited
	No. of Colleges	Accredited	No. of Colleges	Accredited		
Middle States	51	29	66	30	117	50.4
New England	5	1	31	18	36	52.8
North Central	153	55	65	21	218	34.9
Northwest	25	20	6	2	31	71.0
Southern	92	59	97	59	189	62.4
Western	64	61	8	4	72	90.3
Totals	390	225	273	134	663	54.1

Explanation of Table XI

REGIONAL ACCREDITATION OF JUNIOR COLLEGES

Table XI was first used in the 1958 *Directory* because of growing interest among junior colleges in regional accreditation. There is great variation among the regions and the states in the proportion of junior colleges regionally accredited. A little more than half of the nation's junior colleges now are regionally accredited. In view of the importance of regional accreditation in the public mind, those areas in which few junior colleges are accredited may well wish to consider appropriate steps for meeting this problem. Data for Table XI are presented as of October 15, 1959.

JUNIOR COLLEGE FACULTIES

Full-time faculty of 20,105 held about the same as the preceding year, while part-time faculty increased from approximately 13,400 to 14,282. The total full-time equivalent faculty numbered 25,105. (See Tables I-IV of the Junior College Directory, published in the January 1961 *Journal* for instructional and administrative faculty figures and for summaries of faculty by states.)

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